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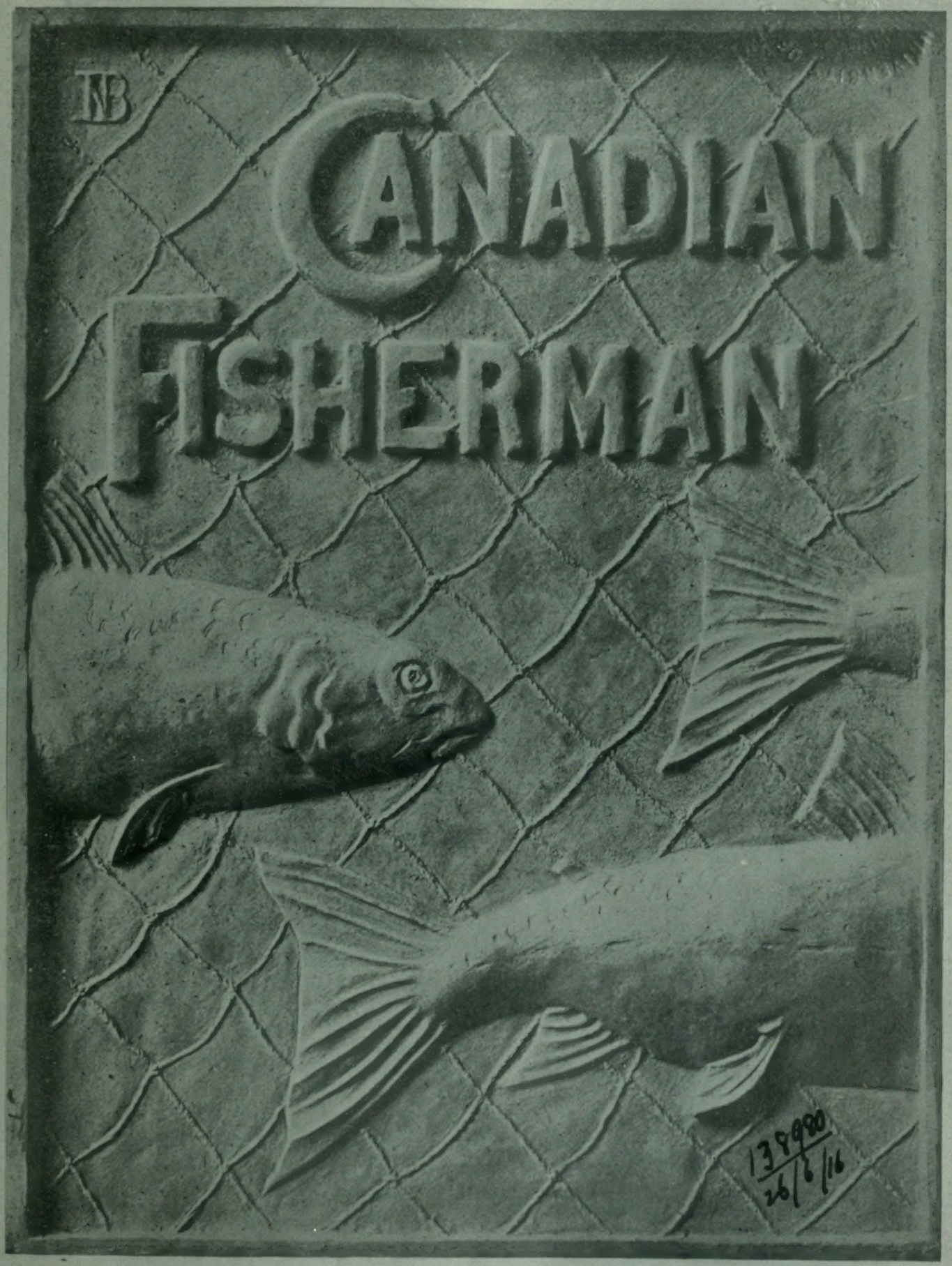

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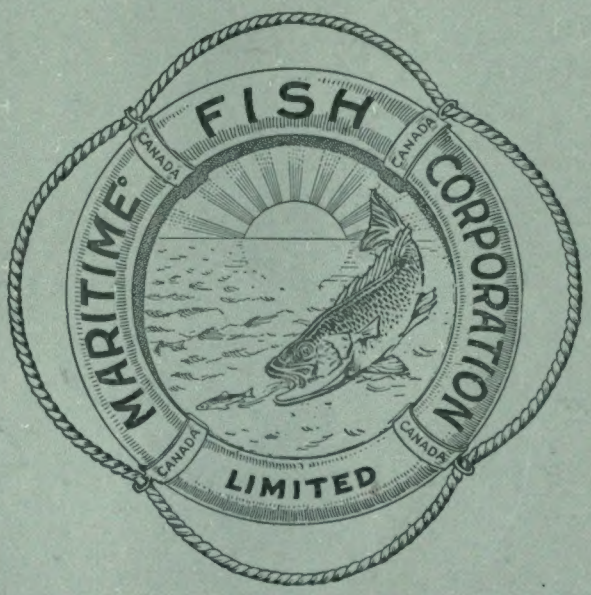

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CANADIAN FISHERMAN

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 104-105 HOMER ARCADE BLDG.
NEW YORK OFFICE: 206 BROADWAY

Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

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Vol. I. MONTREAL, JANUARY, 1914 No. 1

SUCCESS TO THE FISHERIES.

The opening days of what promises to be the greatest year in the history of Canada's fisheries, is a fitting time for the launching of a journal devoted to the interests of the fishermen and the fish trade of the Dominion.

Up to the present, the men engaged in the fisheries of Canada have had no paper or magazine specially written for them or representing the fishing business in any way, and considering that the Canadian Fisheries last year amounted to thirty-four million dollars in value, the industry has grown to proportions which fully justify the publication of a journal to cover all that is going on in the trade from coast to coast and at the same time assist in the development of one of Canada's greatest natural resources—the Fisheries.

A good live trade journal can do a great deal towards helping the progress of an industry. It is the means of bringing those who are engaged in the business together. The special articles and news items published in its columns are bound to be of value to both fishermen and shore dealers, while the suggestions of men who know what they are writing about, whether fishermen or dealers, will do much to help the trade and give a better understanding of affairs between them.

The fishing trade is divided among three classes. First, comes the fishermen themselves—the men who catch the fish. Second, are the wholesalers who purchase the fares and look after the distribution of the fish among the retailers. Third, consists of the retailers who sell the fish to the general public. Among the three classes there is a great deal of misunderstanding mostly caused by ignorance of each others particular part of the business. The fishermen know very little about the troubles and difficulties which beset the wholesalers in making and supplying markets, and the wholesalers, in turn, know very little about the hardships the fishermen have to undergo in order to bring in the fares. The retailer, as a rule, knows the least about either of the other two. The consequence is that all three are divided in ideas and pulling against each other. Not in every case, but in a great many.

The great success of any business consists in all hands pulling together. All three sections are engaged in supplying the goods to the consumer and trying to create a larger market in them. but a lack of knowledge of the conditions which rule in each section has a tendency to hinder the progress of the business. Here is where the influence of an able trade journal like the CANADIAN FISHERMAN will do a great deal to help the industry. Our organization with its practical writers and correspondents scattered throughout all the fishing sections of Canada; our acquaintance with the fishermen themselves, the wholesalers and the state of the markets throughout the Dominion, puts us in a position to help all sections without favoring one more than the other. In the pages of the CANADIAN FISHERMAN the fishermen will get a great deal of information about other parts of their business which they could never get anywhere else, and the same applies to the wholesalers and retailers.

Success to the Fisheries is the watchword of this magazine. We are starting out with the intention

of boosting the fish business of Canada and we hope thatall who are in the trade, whether fishermen or merchants, will assist us to do so. We are not influenced in any way by politics, nor in the pay of trusts, syndicates or Unions. We do not intend to do any knocking unless it is for the good of the trade.

The first number which we present to you this month is by no means perfect, but we want to make it so before long. In this we ask the advice of the men in the business. The CANADIAN FISHERMAN is your magazine and it makes no difference to us whether the men who advise us handle the twine or trawl or work at the desk. Assist us by subscribing to the magazine regularly and making helpful criticisms, and we will do our best to make good on the task we have set ourselves.

The present High Cost of Living agitation is the Golden Opportunity of the Fish Business. Advertise the cheapness of Fish as a substitute for Meat and get the Consumer to eat more of it.

NEW NORTHERN FISHING GROUNDS.

The recent report issued by the Marine Department of the investigations of Fishery Officer Thomas Tanner, in the waters of Davis Strait this year, forecasts the great possibilities of these waters and of Hudson's Bay as future fishing grounds for Canadian fishermen. In his report, Mr. Tanner states that codfish is most abundant and while the weather is perfect for drying in these northern latitudes, he suggests that owing to the distance from a market, that the fish caught should be salted in the manner practiced by the vessels of the Lunenburg fleet. For many years American Halibuters have made the long trip, fishing the Gulf of St. Lawrence and Anticosti grounds in the early part of the summer and as soon as the ice opened, proceeding through the straits of Belleisle, as far north up the Labrador coast as Cape Chidleigh, at the entrance to Davis Straits. As a rule they went no further but returned from there and commenced their journey to the southern markets.

With reference to the fishery possibilities of the waters of Hudson's Bay, Mr. F. H. Clergue, President of the North Railway Company, a line which is being constructed from James Bay to Montreal, states that he has data which proves conclusively that the waters of this great inland sea are teeming with halibut and cod fish, while the numerous rivers flowing into the eastern side of the Bay are favorite spawning places for the Arctic salmon, and in his opinion these rivers will be utilized in the salmon industry, as are the waters of British Columbia today.

Fishing in Hudson's Bay proper, can be carried on for the greater part of the year, as the Bay itself, does not freeze over The vessels employed would have to be steam propelled and specially constructed of steel to navigate through ice. The method of fishing in all probability would have to be by otter-trawl, though steam dory trawling could be carried on. A ready market for the fish caught in these waters would be afforded by transshipping the fish at Nottaway—the North Railway Company's proposed port at the Southern extremity of James Bay—and within twenty-four hours they could be in the market at Montreal.

It will be some time yet before the waters of Hudson's Bay can be used as a fishing ground, for, until the North Railway is completed, there will be no means of transportation for the fish unless by getting out through Davis Straits, and navigation through them is limited to a few weeks in the year owing to the Arctic ice, but there is nothing to hinder Canadian bank trawlers sailing up into the Davis Straits when the ice permits and reaping some of the harvest of fish which is undoubtedly there.

The possibilities of Davis Straits and Hudson's Bay as future fishing grounds should be kept in mind by Canadian fishermen and when the time comes, it would be well for the fishermen of our Eastern coast to be ready to step in and make use of the possibilities which lie adjacent to Canada's coast and within territorial waters.

THE GERMAN CARP.

No species of fish seems to multiply as quickly as those of an undesirable or unprofitable type. The fishermen of the Atlantic coast has the voracious dogfish, skate, blue shark and sculpin, forever on his hooks or in his twine and as they are fish with no market value they are condemned accordingly. The inland lakes fishermen has long regarded the common German carp as being a useless, destructive and unmarketable fish. They say he is uneatable and that his presence in the waters of the lakes keep other and better fish away. For their introduction into our waters, the United

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CANADIAN FISHERMAN

Published Monthly. Devoted to the Commercial Fisheries of Canada, the Science of Fish Culture and the Use and Value of Fish Products

F. WILLIAM WALLACE
EDITOR

To the reader:

This magazine is published solely in the interests of all branches of the Canadian Fishing Industry.

The Editor aims to make it of practical and scientific value to fishermen and those in the fish business by publishing the latest information upon the Fisheries as well as printing illustrated articles upon the Industry from men who are experts in their particular lines.

The co-operation of everyone engaged in the Fisheries of Canada will materially assist this undertaking.

Suggestions from your experience and letters and articles upon the Fishing Industry will be most welcome, as well as your subscription on the attached blank.

Yours very truly,

F. WILLIAM WALLACE,
Editor.

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States Fishery Commission is blamed, and no doubt the gentlemen responsible have had an uneasy conscience ever since.

The law of supply and demand, however, often turns a seeming pest into a marketable product. It is not so very long ago when the palatable sea fish known as cusk was regarded as being useless by fishermen. Nowadays, there is a good market for them. Swordfish had no value a few years ago. Today, swordfish is regarded as a luxury and worth from 20 to 25 cents a pound, while even the hated dogfish has a marketable value when reduced into oil and fertilizer, and, as it is quite an eatable fish, there is no doubt but a market will come for it in the future. Skate, which is not eaten on this side of the Atlantic, has a ready sale in British markets, and the sea catfish, scarcely marketable in Canada, fetches a good price in the United States.

While the gross German carp commands but a small sale as a food fish among people who have been used to eating it in other countries, yet Professor Prince, Dominion Commissioner of Fisheries, holds out a hope that the spawn of carp, when properly cured, may be sold as an excellent substitute for caviare. The demand for caviare—otherwise sturgeon spawn—has been steadily increasing, and with the demand and the limited supply, the price has been increasing also. If Professor Prince is successful in his experiment with the spawn of carp as a substitute for sturgeon caviare, he and the Fisheries Department will receive the heartfelt thanks of the lake fishermen for the work of changing a present day pest into a marketable product.

Scientific investigations along these lines are always to be commended. Our waters teem with numerous varieties of fish which are at present unmarketable, and if the Fisheries Department, co-operating with the wholesale distributors of fish, can create ready markets for these unsaleable species, they will not only benefit the fishermen, but they will also be the means of reducing the high cost of living to the consumer.

THE TOLL OF THE FISHERIES.

The casualties to Canadian fishing vessels and fishermen during the year 1913, as shown by the monthly bulletin regarding the sea fisheries, are as follows:—

Nova Scotia—3 vessels and 35 boats wrecked and 8 fishermen drowned;

New Brunswick—5 boats wrecked and 4 fishermen drowned;

Quebec—4 boats wrecked and one fisherman drowned;

British Columbia—2 vessels and 2 boats wrecked and 1 fisherman drowned; or a total for both coasts of five vessels and 46 boats wrecked and 14 fishermen drowned.

SEA FISHERIES OF CANADA, 1913.

The total value of fish, in first hands, landed on the Atlantic and Pacific coasts during the period from April to November, 1913, amounted to $17,293,083. This is an increase of $2,445,565 over the value of the landings for the same period in the preceding year.

The kinds that have contributed chiefly to the greater total are salmon, with an advance of $913,312, and halibut with an increase of over half a million dollars. There is a very gratifying increase in the value of mackerel, amounting to no less than $404,589. The value of cod is also greater by $180,875. The sardine catch in the Bay of Fundy is about fifty per cent less this year than last; but owing to the enhanced prices, due to the scarcity of supply, the value has fallen not more than about thirteen per cent. During the 1913 period above mentioned, there were packed about 4,000 fewer cases of lobsters than in the 1912 period; but in the former period there were shipped in shell 6,477 hundredweights more than in the latter period.

FRESH ATLANTIC FISH FOR THE WEST.

The fishing capacity of a beam trawler was demonstrated recently when one arrived from the Gulf of St. Lawrence, with 180,000 pounds of fish for the North Atlantic Fisheries, Ltd., at Port Hawkesbury. Ninety tons of fish is a pretty big quantity of the finny tribe for one trip of the trawler, but it was not long before this great catch was stored in the cold storage warehouse and prepared for shipment by refrigerator companies to Montreal, Toronto, and even as far west as Vancouver.

It seems almost incredible, but fresh fish are actually sent from Mulgrave, N.S., by Intercolonial Railway refrigerator cars consigned right through to the Pacific Coast. These are mostly haddock and cod, which are not found to any great extent on Pacific waters. Large quantities of finnan haddies are also expressed through Mulgrave to western points. The removal of the American tariff on fresh fish has had the effect of largely increasing the export from the fishing centres on the strait of Canso and the freezers can scarcely get enough fish to fill orders. A big fleet of gasoline boats harvest the sea's riches around the shore water daily, while the trawlers steam out to the fishing banks in the Atlantic and the Gulf of St. Lawrence. The port of Canso, Arichat and St. Peters are right at the door of the most productive banks, and there is every indication of a great development of the fishing industry along more systematic and up to date lines. Cold storage plants to handle the fish and measure them properly for shipment inland are needed. The plants at Hawkesbury and at Canso are splendidly equipped, but there is the opportunity for other and even greater ones. With increasing prices for the fishermen the army of toilers of the sea will be largely increased and it is to be hoped that the migration of young men from the fishing villages to the industrial centres will be arrested.

Exhibit of the Maritime Fish Corporation, Ltd., at the Canadian National Exhibition, Toronto, 1913.

TORONTO EXHIBITION EXHIBITS.

We herewith reproduce photographs of two of the most notable displays at the recent Fisheries Exhibit held at the Canadian National Exhibition, Toronto this fall.

Both these exhibits greatly advertised the value of Canada's fisheries to the public, and, with the display of smoked, salted, cured, boneless and frozen fresh fish in the cold storage, the two stalls did much to help in gaining the award of the gold medal which was presented to the Fisheries Exhibit when judged with the Fruit, Mining and Agricultural displays in the Government Building.

Other notable exhibits were the Lake fish display of the F. T. James Company, Toronto; the British Columbia Fisheries Exhibit; and the Marine and Fisheries Show of fish Specimens.

Much credit is due to the efforts of Mr. W. A. Found and Mr. Andrew Halkett of the Marine Department in organizing the Exhibit in co-operation with the large Fish concerns who erected stalls.

The success of the affair warrants a still greater display of Canada's Fisheries next year, and it is expected that a whole wing of the Dominion Government Building will be devoted to the Exhibit in 1914.

EXPORTS OF CODFISH FROM MONTREAL.

During the season of navigation, 1913, 7,691 packages of codfish were shipped from Montreal to Great Britain and Europe. Most of the shipments came up from the Gulf of St. Lawrence fishing centers and were made up as follows: 4,820 casks, 2,457 bags, 322 barrels, 62 tubs, 30 boxes.

ICELAND FISHERIES.

The British Vice-Consul at Reykjavik, Iceland, reports that the codfishing around the coast has been a moderate one, but the high prices obtained for the catch have made the net result good. The weather has been exceptionally bad for curing purposes.

HIGH LINE IN THE WHALING FLEET.

The whaler "Brown" of the Canadian North Pacific Fisheries fleet is the high line "spouter" for the season. During the summer months she harpooned 121 whales.

WHOLESALE FISH PRICES MONTREAL MARKET.

(Quoted by D. Hatton & Co.)

Frozen Fish.

Salmon, Gaspe, per lb., 16c. to 17c., red, steel heads, 13c. to 14c., sockeye, 10c. to 11c., Cohoes or silvers, 9c. to 10c., pale Qualla, dressed, 7½c. to 8c.; Halibut, white western, large and medium, per lb., 9c. to 10c.; Mackerel, bloater, lb, 7c. to 8c.; Herrings, medium, 50 lb., per 100 count, $1.70 to $1.80; Haddock, medium and large, 5c. to 5½c.; Market cerfish, 4½c. to 5c.; Steak codfish, 5c. to 5½c. Pollock, 4c. to 4½c.; Tommy Cods, per bbl, $2.25; Smelts, extras, 10, 20, 25, per lb., to 12c., medium to large, to 10c., small, to 7c.; Flounders, 6c.; Canadian soles, 8c.; Bluefish, 16c. to 17c.; Striped Sea Bass, large, 17c. to 18c.; small, 12c. to 13c.; Sea Trout, 10c. to 11c.

Smoked Fish.

Haddies, 15-lb. boxes, new, per lb. 7½c. to 8c.; haddies, 30-lb. boxes, new, per lb. 7½c. to 8c.; haddies, fillets per lb. 11c.; do, Niobe, boneless, lb. 8c.; Yarmouth bloaters, 60 in box, Niobe, selected, $1.30; St. John's Bloaters, 100 in a box, $1.10; Smoked herrings, medium, per box 13c.; smoked boneless herrings, 10-lb. box, $1.00; imported Scotch kippered herrings, box of 40, $1.50; Cisco herrings, a basket of 15 lbs., $1.50.

Oysters.

Cape Cod shell oysters, per barrel, $9.00; Malpeque, shell oysters, selected XXX, per barrel, $9.00; Malpeque shell oysters, ordinary, per barrel, $8.00; Malpeque, shell oysters, caraquets, per barrel, $5.00; clams, per barrel, $9.00; mussels, per bushel $6.00; live lobsters, medium and large, per lb. 25c.; boiled lobster, medium and large per lb., 28c.

Canned Fish.

Sardines in tomato sauce, ¼, cross-fish, per case, 100 tins. $10.00; anchovies, 1 lb. tins, per dozen, $2.25; scollops, 1 lb. tins, per dozen, $2.25; shrimps, 1-lb. tins, per dozen, $1.50; haddies, 1-lb. tins, per dozen, $1.50; clams, 1-lb. tins, per dozen $1.10; cove oysters 1-lb. tins, per dozen, $1.50; cove oysters, 2-lb. tins, per dozen, $2.65.

Bulk Oysters.

Hatton's best standards, imperial gallon, $1.40; solid meats, imp. gallon, $1.70; selects, best, imp. gallon, $1.80; selects, solid meats, imp. gallon $2.00; best clams, imp. gallon, $2.50; best scallops, imp. gallon, $3.00; best prawns, imp. gallon, $2.00; best shrimps, imp. gallon, $2.25; sealed best standards, quart cans, each, 35c.; sealed best selects, quart cans, each 45c.

Exhibit of the North Atlantic Fisheries. Ltd., at the Canadian National Exhibition, Toronto, 1913.

THE FISHING INDUSTRIES OF CANADA

By PROFESSOR EDWARD E. PRINCE, LL.D., D.Sc., F.R.S.C., Etc., Ottawa. Dominion Commissioner of Fisheries, and Representative of Canada on the International Fisheries' Commission (under the Treaty of 1908). *

Among the great natural resources of Canada, the fisheries take a foremost place. For vastness of fishing areas and variety of valuable species of fish, they are not excelled by those of any other country.

Area of Canadian Fishing Grounds.

The fishing industries are carried on in two of the great oceans of the world, viz; the Atlantic, where the fishing grounds are estimated to extend over an area of 200,000 square miles, and the Pacific ocean, where the total inshore area is estimated at over 40,000 square miles on which vast area the sheltered straits, with Hecate Strait between Queen Charlotte Islands and the mainland, cover an area of 20,000 square miles, but in addition to these vast areas in which Canadian fishermen carry on their industry, Canada possesses inland waters which are estimated to embrace at least 140,000 square miles, these including the greatest fresh-water lakes in the world. Indeed, they are of the nature of inland seas, for Lake Superior covers over 31,000 square miles, and is 165 fathoms deep in many places; Lake Huron covers 25,000 square miles with a greatest depth of 125 fathoms; Lake Erie nearly, 10,000 square miles; but it is the shallowest of all the lakes, not more than 35 fathoms in its deepest part; and Lake Ontario 7,240 square miles, and 123 fathoms in its deepest portion.

Fishing Grounds Shared by Other Nations.

It must be remembered, however, that Newfoundland and a portion of Labrador are not Canadian territory, but still form part of a separate British Colony, Outside the three mile limit, the Atlantic waters of the Dominion are resorted to by the fishing fleets of foreign countries such as the United States, which carries on some of her most important deep-sea fishing in the waters washing the eastern shores of Canada; and France, Spain, and other countries still carry on extensive fisheries on these waters alongside the Canadian fishermen.

The famous fishing banks of this part of the North American continent have indeed for over 500 years, been the scene of great fisheries conducted by France, Spain, Portugal, Scandinavia, the Netherlands, and by the British fishermen themselves, and the colonists of Britain of whom a great portion, about a century and a quarter ago, became citizens of the newly-formed Republic of the United States. All these have secured incalculable quantities of fish there for the markets of Europe and America. The Great Lakes, also, it must be noted, are divided by an imaginary boundary line into British and United States territory so that the Canadian fisheries are practically confined to about half of the total area of these great freshwater seas (over 72,000 square miles), while on the Pacific coast where the question of the territorial limits of Canada have never been definitely settled, the fishing fleets of Washington State in the United States, fish practically all the time in the inshore waters of Canada and have made immense catches, especially of halibut in Hecate Straits already mentioned.

The vast seas of the Arctic Archipelago, which were handed over to Canada by Britain (where exist the most extensive whaling grounds in the world), have been exploited, not by Canadians, but by United States citizens, and to a large extent by Scottish whalers.

Hudson's Bay Waters.

The fishery resources of Hudson's Bay, apart from the whaling and walrus hunting, have been little developed and offer a great field for Canadian fishing enterprise. At least a dozen large rivers drain into this northern sea which has an rea about half that of the Mediterranean sea and embraces a drainage area estimated at 370,000 square miles.

Excellence of Canadian Fish (Largely Salmonoids).

But the three prominent features just specified, viz: the vastness of the fishing areas, freshwater and marine; and the variety of the fish inhabiting these waters; and the fact that they have been exploited; not by Canadians only, but by the fishermen of foreign countries, especially the United States, are not all. It must not be forgotten that the seas and rivers and lakes of Canada have a northerly character and are consequently cold, and it is recognized by all authorities that waters which are remarkable for their coldness and purity as are those of Canada, are most favourable for the best kinds of edible fish. The Salmonidæ are essentially a northern family of fishes and Canada is par excellence, the country of the Salmonidæ, of which nearly 50 species have been described by Ichthyologists. Apart from the salmon and trout which abound to an amazing extent in the lakes and rivers generally, the cod, haddock, halibut, herring, and lobster fisheries of the Dominion are amongst the greatest in the world, while on the Great Lakes, the whitefishes or Coregoni, abound in immense quantities.

Annual Value of Canadian Fisheries.

The total value of the Canadian fisheries, according to the last statistics, amounted to $33,389,464, but like all fishing industries, they are subject to fluctuation, as is shown by the following figures for the last ten years:

*An address delivered in Rome to the International Congress of Fisheries, and honoured by the presence of Their Majesties the King and Queen of Italy. The address is printed in the **Atti del V Congresso Internazionale di Pesca, Rome 1913**; but it may be noted that the statistics have, in the main, been altered and brought up to date for the present publication.

1901	$25,737,153
1902	21,959,433
1903	23,101,878
1904	23,516,439
1905	29,479,562
1906	26,279,485
1907–08	25,499,349
1909–10	29,629,169
1911	29,965,433
1912–13	33,389,464

The cod and salmon fisheries take supreme place in the fishing industries, but the lobster, herring, halibut, haddock, and whitefish fisheries are of only inferior importance in value. The mackerel fisheries have declined very seriously in Canada, while some fisheries, such as those of the clam, the hake, the sardine and smelt, have increased greatly in value.

The following figures for 1911 show the relative values of 21 of the principal commercial fish:

The sea fisheries contributed during the last year $129,315,772, and the inland or fresh-water fisheries $4,073,692.

During the last year the value of the fisheries in the several Provinces is as follows:—

British Columbia easily leads in the value of fisheries, the total product being $14,455,488, an increase of $778,363. Nova Scotia is second with $7,384,055, a decrease for the year of nearly two millions. New Brunswick stands third with a total catch valued at $4,260,056, a decrease of $622,103. Ontario is fourth with $2,842,873, an increase in value of $637,442.

The very largely diminished value in Nova Scotia is the result of stormy weather throughout the fishing season of 1912, which made deep sea fishing particularly difficult, and greatly curtailed the catches of cod, haddock, halibut and lobsters.

The considerable decrease recorded against New Brunswick is due almost entirely to the low prices of sardine herring in Charlotte county.

These fish were as plentiful as ever, but in consequence of the canned sardine market in the United States becoming overstocked, fishermen allowed many big catches to escape.

The following table shows the relative values of the chief commercial fishes returning $100,000 and upwards in their order of rank:—

Kinds of Fish	Value.
Salmon	$10,025,523
Lobsters	4,571,014
Cod	4,368,750
Herring	3,350,546
Halibut	2,719,616
Haddock	1,065,536
Whitefish	1,054,925
Smelts	982,800
Trout	709,078
Sardines	688,752
Mackerel	635,293
Pickerel	465,462
Hake and cusk	400,180
Pike	319,476
Clams and quahaugs	314,047
Crabs, Cockles, etc	213,740
Pollock	178,294
Alewives	163,247
Oysters	142,602
Sturgeon	133,109

Industry Involves Big Sum

The estimated total capital invested in the fisheries amounted to $24,388,459. Of this sum $20,642,714 was invested in connection with the sea fisheries, and $3,945,745, in connection with the inland fisheries. Of the total $7,744,038 represents the value of vessels and boats, while $16,644,421 stands for the value of fishing gear, canneries, fishhouses and other fixtures necessary to the carrying on of the industry.

Statistics of Fishermen, Vessels, Etc.

The last official statistics for the year ending March 1911 show that nearly 100,000 persons are

Dory alongside Vessel on the Fishing Banks.

directly engaged in the fishing industry, 65,081 men forming the crews on the fishing boats, and nearly 25,000 persons being employed in canneries, freezing establishments, etc. The vessels and boats employed number 40,657 of which 1,680 were larger vessels, steam tugs, etc.

The great majority of the vessels employed were sailing vessels, but the use of gasoline engines has been increasing in recent years, and there were 4,588 fishing boats fitted with these engines.

Steam herring "drifters" have been experimentally tried, but not with much success owing to the in-

definite information as to the movements of Canadian herring; and steam trawlers have also been used to some extent and with a measure of success considering that the trawling grounds are little known, and there is much rocky bottom which destroys the trawling gear, but a large proportion of the fish taken, especially flat fishes, are not in great demand in the accessible fishing markets.

Methods of Fishing.

At least a dozen methods of taking fish for the markets merit notice on account of their importance, but the three principal methods are pound-nets or fish-traps, and gill nets, which may be moving drift nets or fixed gill nets, and what are called 'bultows' or trawls which are really long lines carrying baited hooks.

Cod traps in the Gulf of St. Lawrence, and mackerel traps and herring traps along the Atlantic shores and in the Great Lakes are of small size and cost compared with the huge traps set for salmon on the Pacific coast, many of these traps costing from $25,000 to $35,000 and running out from the shore into the sea as far as two miles.

Purse-seines have been used, but in the general opinion of the fishermen, it is too destructive a form of net, and for some years was forbidden by Canadian statute.

Around the Bay of Fundy, a peculiar form of trap called a 'brush weir' is commonly used. Over 800 of these traps, which are composed of a wicker-work wall and a terminal enclosure, formed of interlaced branches of trees, have been employed in the capture of so-called sardines, which are really the young of the herring (Clupea harengus).

One peculiar form of net, which, no doubt, is on the model of a trap used by the aboriginal Indians of North America, is called a 'hoop-net' and consists of a funnelnet held in position by a successive series of hoops placed at intervals which keep the funnel open, and by an arrangement of partitions with apertures, preventing the escape of fish which make their way into it. These hoop-nets, or verveux, are very widely used for taking inferior fish, such as perch, catfish, etc.

Another form of trap is used for taking eels and is generally made of strips of wood in the shape of a cage with funnel entrance.

Drag seines are also used both in the sea fisheries and on the lakes, and vary in length from 70 yards to 300 yards or even greater lengths, and these seines are used on flat clean shores where, by making a wide sweep with the net and hauling in both ends, the fish contained about the centre of the net are hauled ashore. The end portions or wings are of larger mesh and enable small fish to escape but the bunt or centre of the net is of small mesh so that the fish are enclosed and do not entangle themselves. Owing to its destructive character, the drag seine has not been generally used in Canada.

Deck Pen of Haddock and Cod Containing 5000 Pounds.

Large scoop nets and bag nets, which are mainly used in winter through the ice, are employed for taking smelts, striped, bass, etc.

Salmon and Lobster Canning Industries.

The salmon and lobster canning industries of the Dominion of Canada, salmon on the Pacific coast, and lobsters on the Atlantic coast, are industries of such a special nature that they deserve particular mention. There are 86 salmon canneries in British Columbia valued at nearly $3,000,000, packing annually an enormous quantity of fish, these fish being caught by an army of fishermen numbering nearly 8,000 who use over 900 miles of gill net or drift net, these nets being fished at the mouths of various large salmon rivers, such as the Fraser, the Skeena, etc., and in the adjacent straits. The total number of persons employed

in the Pacific salmon fisheries of Canada is nearly 20,000.

The lobster industry is carried on upon a large scale at all available points along the Atlantic coast, from Labrador and Magdalen Islands to Grand Manan on the border line of the United States, the number of canneries being 682 of a value of about $600,000 exclusive of the lobster traps, which number about a million and a half, and are valued at over one million dollars. The total number of persons employed in this industry is not less than 42,000 of whom 25,000 are actually engaged in fishing.

As the entire inshore waters of Canada and the Atlantic coast appear to be one immense resort for lobsters, this industry has been carried on, on the extensive scale indicated, without absolutely exterminating the supply. Owing to excessive fishing and increased quantities of traps and gear, the general opinion prevails that the quantity of lobsters has diminished and certainly the average size of the lobster has diminished from 11 or 12 inches to about 8 inches, and the Dominion Government have endeavored to maintain the supply of this valuable crustacea by means of 8 or 9 lobster hatcheries and by lobster ponds or reserves for impounding egg-bearing lobsters which are liberated when the open fishing season ends.

In recent years the fresh lobster industry has developed to an enormous extent, no less than ten or eleven million pounds of lobsters being sent to the United States' and Canadian markets either alive or boiled in the shell, the total value of the entire industry canned and fresh lobsters being between three and four million dollars per annum.

Baiting up the Trawls with Herring Bait.

Herring, Mackerel and Other Fisheries.

The herring fisheries are, as yet, not fully developed, and their annual value does not exceed two and a half million dollars, a large portion of the annual catch, viz: 360,000 barrels, being sold at a very low price ($1.00 or $2.00 per barrel), especially for the baiting of cod lines and lobster traps in the Maritime Provinces, on the Atlantic coast, no less than 28 million pounds of herring being used fresh or smoked or canned or roughly salted, called 'dry-salted,' per annum, and bringing nearly $500,000, while 199,867 barrels of herring were sold in 1911 as pickled herring, and brought $736,383.

The mackerel fishery of Canada has been almost as valuable as the herring fishery, but is subject to great fluctuations, so that the last official statistics show a tremendous decrease. the total catch only equaling five and a half million pound and a total value of about $400,000 but the average value of the mackerel fishery per annum, is from a million to a million and a half dollars. In recent years, owing, it is claimed, to overfishing, especially by the use of purse-seines by United States fishermen, the value for some years has seriously decreased.

Halibut, haddock, smelt and so-called sardines, which are really small herring, range in value from $500,000 to over a million and a quarter dollars, the halibut especially showing immense development, owing to the wonderful growth of the halibut industry on the Pacific coast, where the largest halibut grounds in the world exist, especially around Queen Charlotte Islands and Hecate Straits; though along the whole coast of British Columbia, halibut abound everywhere.

Great Lakes Fisheries.

On the Great Lakes the most important fish are the Great Lake trout (Cristivomer), the whitefish (Coregonus) and the pike-perch or pickerel (Lucioperca or Stizostedion), called dore by French-Canadians, and the value of each of these fish runs from about a million dollars for whitefish,

$800,000 or $900,000 for trout, and $500,000 for pike-perch.

Sturgeon and Caviare Industry.

The sturgeon is a fish occurring in practically all the waters of Canada, both the Atlantic rivers, the Great Lakes and the Pacific coast, and few people realize the high value which Canadian sturgeon have attained in some years, but it has witnessed a considerable decline, and, whereas in some years it exceeded half a million dollars in value the value of the caviare and of the sturgeon flesh in the last returns hardly reaches $100,000.

For some years the caviare produced from Canadian sturgeon on the Lake of the Woods exceeded 40,000 lb. per annum and this sold wholesale at 75c. per lb., ($30,000 total value) while the flesh of sturgeon meat exceeded a million pounds in the course of the year and brought between $60,000 and $70,000; but in recent years the sturgeon fishery has declined very seriously, so that the total caviare product did not exceed $16,000 in value and the sturgeon meat, at the higher rates now realized, brought not more than $84,000.

When the sturgeon industry of Canada was at its height, great quantities of caviare were shipped via New York to Russia and Germany, where it had a very high reputation and was said to have been repacked and put on the markets as the best Russian product.

Atlantic, Greatlakes, and Pacific Fisheries Compared

The Atlantic deep-sea and inshore waters, where cod, halibut, herring, mackerel, hake, lobsters, salmon, shad, oysters, and smelts are caught and yield annually 16 or 17 million dollars per annum, while the rivers and lakes of the interior from the Maritime Provinces to British Columbia abound in fine whitefish, lesser whitefish called lake herring, pickerel or pike-perch, land-locked salmon, river trout, black bass, sturgeon, and other kinds totalling up to a value of about four million dollars per annum; but it is on the Pacific coast that the fisheries promise to outstrip those of all other parts of Canada, for the various kinds of salmon peculiar to the western shores, especially the sockeye salmon or blue back salmon (Oncorhynchus nerka), the quinnat or spring salmon, and the cohoe or silver salmon, and the other inferior kinds abound in such incredible quantities that the industry, as already indicated, is one of the largest and most remarkable in the world, and the halibut banks, as above stated, yield an amazing quantity of fish every year, but the herring, the skill or black cod, the smelt, oysters, clams, and cauldle-fish or o lochan, are being utilized and great fishing industries are being developed. Crabs and other shellfish, especially prawns and shrimps, abound and the true pilchard and anchovy and other prized species occur, but at present these resources have not been developed. The true lobster of the Atlantic does not occur in Pacific waters.

Fur Seal Industry.

Little need be said about the fur-seal industry, which has attracted great attention, less from its money value, which has rarely reached a million dollars per annum, than from its importance in a diplomatic sense, the International discussions as to the rights of the nations concerned, beyond recognized territorial limits, being of the highest International importance. The Canadian fur-seal industry has declined so seriously as to not amount to $8,000.

Whaling.

Within the last ten years whale-hunting and the utilization of whale products has been pursued in Canada with most profitable results. On the Atlantic coast and in the Gulf of St. Lawrence whaling stations have been established and on the Pacific coast four large factories have been operated and received large numbers of whales, single stations receiving as many as thirty or forty whales per week, or 400 to 500 in the course of the year. Very large finner whales (Balœnoptera) and humpbacks (Megaptera) have been taken as well as smaller whales and a number of sperm whales (Physeter) have also been captured by the steam whaling vessels in connection with the factories. Eleven sperm whales were taken at one Station (Kuyoquot) in 1911. From these whales, oil, guano or ground up whale meat and bones, and other products have been yielded, and have resulted in very large profits to the whaling Companies, in some years the total value exceeding a half million dollars for the season. The Arctic whaling in the distant northern seas of Canada, though still carried on, is almost a depleted industry.

There is little doubt that the excessive destruction of whales in connection with these factories, especially of mother whales with calves, must result in a decline in this industry. A Fishery Commission has recommended that "sanctuaries" where the mother whales will be free from molestation, ought to be established by law, at intervals along the coast on the Atlantic and Pacific shores, but this has not yet been done.

Fisheries Administration.

At the date of the Confederation of the various Provinces of Canada in 1867, a member of the Cabinet, the Minister of Marine and Fisheries, was charged with the control of the Fisheries, as well as the shipping matters of the Dominion, and a special Government Department was created which maintains an official system of management, and provides for the enactment of fishery laws in all parts of the Dominion, but not only was Fisheries jurisdiction carried out by the Department, but a system of licensing was also enforced until certain of the Provinces, (Ontario and the Eastern Provinces), raised the question of provincial fishery rights, and after lengthy legal disputation the matter was finally referred to the Privy Council in England.

Effect of Imperial Fisheries Judgment, 1898.

That high British Tribunal, in 1898, gave an important decision which allocated to the Dominion Government the duty of framing fishery laws and a limited power of exacting license fees where the Canadian Parliament deemed it advisable, but while "jurisdiction" was thus clearly defined as the supreme right of the Dominion Government at Ottawa, the "property rights" in the fisheries was declared to be vested in the various Provinces, with the exception of the Western territories, now formed into Provinces, and British Columbia.

In consequence of this decision Ontario and Quebec and other Provinces have now the right to exercise their licensing prerogatives, though in public harbors and along open stretches of the sea-coast, the limits of Dominion and Provincial rights re-

main still in a state of uncertainty. High authorities hold the view that for the proper management of the Canadian Fisheries, the jurisdiction and property rights or licensing rights should be all vested in one authority, as the experience in the United States of the conflicting rights of the various states and their dissimilar laws and their unwillingness to recognize Federal authority, has had a most serious result on the fisheries of that great country.

Minister and Fisheries Staff.

Under the Minister of Marine and Fisheries, a Deputy Minister has principal authority, while there is also a Commissioner of Fisheries and a staff of officials in the Parliament Buildings at Ottawa, as well as a large staff of outside officials stationed all over the Dominion, and a fleet of armed cruisers on the Atlantic and Pacific coasts, on the Great Lakes and in Hudson Bay and northern waters.

Management of the Fisheries by Federal Government.

The methods for protecting, encouraging, and restoring the fisheries in Canada are principally the following:

1. Bounties to fishermen on the Atlantic coast. (A yearly sum of $150,000 to $160,000 is divided among the vessels, boats and men employed in the Atlantic deep sea fisheries, being the interest on $4,500,000 paid by the United States to Canada as compensation under the Halifax Award, November 23rd, 1877.)
2. Close seasons during which spawning fish, etc., are protected, and prohibition of obstructions, water-pollution, etc.
3. The maintenance of a system of leases and licenses which, however, has been much curtailed since the Fisheries Decision in London in 1898.
4. Fish-culture establishments, protection of spawning grounds, immature fish, etc.
5. Fisheries Intelligence Bureau commenced in 1889 for reporting by telegraph the movements of important fish in the sea, and the state of the supplies of bait at the principal fishing stations.
6. The instruction of fishermen in the best methods of curing and packing herring as well as improving the herring fishing methods and the construction of superior fishing barrels.
7. The provision under federal auspices of facilities for restoring and preserving bait in refrigerators, either large refrigerators in the hands of companies substantially subsidized, or small bait freezers managed by local fishermen's societies and supported by a grant to meet the first cost up to fifty per cent., and an annual payment of $1 per ton for the bait stored in such freezers for the benefit of the fishermen.
8. The establishment of fish oil and fertilizer works for the purpose especially of utilizing the dog-fish (Acanthias) which abounds, in some seasons, to such an extent as to threaten the prosperity of the deep-sea fisheries. These dog-fish are brought to the Government reduction works and a small payment is made for them per ton and they are ground up into manure, and the oil and other products extracted. Four such large reduction works have been erected at considerable cost by the Government and though operated at a loss each year, have done something to abate the dog-fish pest.
9. Experimental fish-dryers, the first of which was erected by the Government on Prince Edward Island and received from the fishermen partially dried cod, haddock, etc., and by means of an arrangement of heated air-currents, completed the drying of the fish in the most satisfactory way. The system (the Whitman Dryer system) proved a great success and by its use the fishermen can be rendered independent of rain, fogs, and bad weather which are very detrimental to the ordinary methods of curing and drying fish.
10. Fishery Research Stations, called the Biological Stations of Canada, have also been established for investigating fishery problems and reporting to the Government on the results. These Stations, three in number, an Atlantic, a Pacific, and the Great Lakes' Station, are under the direct control of the Biological Board which is composed of representatives of the various Canadian Universities. A staff of Professors and assistants, who volunteer their services, carry on fisheries research in these Stations each year, and they have already reported on such matters as "The Use of Various Kinds of Bait, frozen and fresh," on the "Food of Fishes in the Sea," on the "Effect of Explosives on Schools of Fish," on the "Life-History of Various Fishes," and other problems which are of great moment to the fishing industries. It is anticipated that the Biological work will be much extended in the future, and will include some of the Great Lakes of the West, which have never yet been the subject of scientific investigation.

Fish Transportation.

One of the great obstacles to the development in Canada of the fish business has been the immense distances which separate the cities requiring supplies of fish, and it has been found very difficult to supply cities distant from the sea-coast with fresh fish, though the Great Lakes and interior waters have largely supplied the Canadian demand, but during the last four years the Government has arranged for cold storage cars, each carrying not less than 20,000 lb. of fresh fish to be sent each week from certain points along the sea-coast by express trains, and a Government grant was made by which the cost to shippers or consignees has been reduced about one-third the usual rate. Montreal, Ottawa, Toronto and other towns distant from the Atlantic coast, and Calgary, Edmonton and Winnipeg, distant from the Pacific coast have received supplies of fresh fish, and the fish business has received great encouragement in consequence. One effect of this Canadian Government-aided transportation of fresh fish has been that the importations of fresh fish from the United States into the Provinces of Ontario and Quebec, which in 1906, amounted to nearly two million pounds, fell off in two years to a little over one million pounds, and in 1910 had fallen to about three-quarters of a million pounds, showing that Canada is now increasingly supplying her own local markets with her own sea fish.

The Oyster and Clam Industries.

The oysters of Canada have always been famous for their exceedingly fine quality and both on the Atlantic and Pacific coasts great areas exist upon which oysters have occurred or do at present occur. Indeed, the oyster areas of Canada are of remarkable extent, no less than 5,000 acres of

natural beds occurring in New Brunswick, 4,300 in Prince Edward Island, and 1,250 in Nova Scotia, and upon these beds immense quantities of oysters have been taken during the last fifty years, while in British Columbia, oyster beds upon which occur in vast quantities, the small Columbia oyster (Ostrea lurida), little more than an inch in diameter, but of exceedingly delicate and fine flavor, extend from the Straits of Juan de Fuca, and both sides of the Straits of Georgia north as far as Queen Charlotte Sound.

On both coasts the supply of oysters has not kept pace with the demand and depletion has been universal, thus on the Atlantic coast in 1886, 62,000 barrels of oysters were obtained, whereas in 1901, only 41,000 barrels were secured, and the take in 1909-10 was only 34,000 barrels valued at $171,570. In British Columbia the total annual yield is very much smaller on account of the diminutive size of the oysters themselves and also the scattered nature of the beds, so that not more than 2,000 or 3,000 barrels of oysters are yielded by these beds, with a value of about $26,000 per annum. The total value for 1912-13 was $142,602.

The clam fishery resources of Canada were not appreciated until within the last ten or twelve years, but during this period they have grown to be of considerable importance owing to the esteem in which these shellfish (Venus and Mya) are held in the United States where they rank next to the oyster as a table delicacy. The clams which occur on sandy, and also on muddy, areas all along the Atlantic and Pacific coasts of Canada may be roughly divided into the hard-shell and the soft-shell clam, the former including species of Venus and Macoma, and the latter Mya, chiefly Mya arenaria. Great quantities of these shell-fish have been taken from the inshore beds for purposes of bait, but owing to their increasing value as a food and the great demand for them in the United States markets, a considerable clam industry has grown up for supplying the markets for table use. Indeed, the clam industry has now a total value of $324,643 of which $23,837 is due to the clams procured on the British Columbia shores.

It will be noticed that this clam industry has reached a value of nearly double that of the oyster industry, and if properly conserved, it is still capable of even larger development.

Fishing Schooner in Winter Rig.

Along the Canadian shores occur beds of scallops (Pecten) and of cockle (Cardium), while everywhere occur vast quantities of mussels (Mytilus), but these three important shell-fish are really little used for any purpose.

Quite a large variety of shell-fish of various kinds including whelks, etc., are abundant on the Canadian shores, but are of no economic importance at present. The only mollusk which is worthy of mention on account of its value as bait is that of the squid (Loligo) which is in great demand for purposes of bait. In some seasons these squids are extremely abundant and on the Pacific coast it is stated that over large areas in Queen Charlotte Sound, species of Cephalopod occur in incredible quantities, and upon them the halibut have been found to very largely feed.

Oyster Culture.

For nearly twenty years the Dominion Government has employed a special expert who has brought from the famous Whitstable Beds in England to occupy himself, each season, with the work of restoring decayed oyster beds on the sea-coast. Year after year this expert has levelled, cleaned and re-stocked beds which have been depleted by overfishing, or had decayed owing to deterioration. The results of this work proved most satisfactory, as many depleted beds were brought into fine condition, but owing to the fact that the public have fishing rights on Canadian oyster beds, and that it has not been possible to carry out such a system of issuing leases for a term of years which would encourage private oyster-culture, these restored beds, after being thrown open to the public, have, in most cases, become once more unproductive. The difficulty has been increased owing to the fact that the Provinces on the Atlantic coast asserted "property" rights in oyster beds, and a dispute has been pending between the Dominion and Provincial Governments which prevented the successful establishment of systematic oyster-culture, and in consequence of this unsatisfactory statement of things, the Canadian oyster beds have continued, year after year, to decline, although they might be amongst the most productive and valuable in the world.

Pisciculture.

To supplement the benefits which the fisheries derive from the enforcement of close seasons and other fishery regulations, the Dominion Government has carried on, for the last forty years, an extensive system of pisciculture establishments, in which about a dozen species of useful fish are hatched in quantities every year. Twenty of these hatcheries are devoted to salmon of the Atlantic and Pacific species, over one hundred millions being hatched annually. Eight of these hatcheries are lobster establishments, and they turn out nearly 700 millions of lobsters (Homarus) each season; the whitefish hatcheries, five in number, have an annual output of about 250 millions fry of Coregonus. At some of the whitefish hatcheries, pike-perch or dore to the number of 75 millions are hatched, and in five of the hatcheries, Great Lake-trout (Cristivomer namaycush) are hatched to the number of 16 or 17 millions. Brook-trout, Pacific trout, and black bass (Micropterus) are also hatched and reared, and the hatching of shad (Alosa) has been also commenced, and a special hatchery on the St. John River, in New Brunswick, has turned out one or two millions of these fish during recent years.

These hatching operations are carried on in all parts of the Dominion, and it is generally conceded that great benefit has resulted to the salmon fisheries, the lobster fisheries, and the Great Lake fisheries, from the planting of newly-hatched fry in immense quantities. On a small scale the rearing of many species has been tried, but on account of the vast extent of the waters of Canada which it is desirable to restock, it has been found desirable to plant young fish very soon after they are hatched out from the eggs.

The credit of commencing fish-culture in Canada is due to the late Mr. Samuel Wilmot, whose great work was continued for ten years by the Commission of Fisheries (Professor Prince), but recently a special branch of Pisciculture has been created with a Superintendent and Inspectors who are solely occupied with the fish-culture work. The cost of pisciculture work has increased from $39,496 in 1890-91 to $220,727 in 1910-11, twenty years later.

UNITED STATES FEAR DEPLETION OF ALASKA FISHERIES.

The following appeared in a recent issue of "Leslie's Weekly:"

"Fish are so plentiful in Alaskan waters that they almost jump at you. The fishing grounds extend for over 2,000 miles along the coast and up all the rivers (one of which is at least 2,000 miles long), and all over the adjacent seas. A conservative estimation of the fish taken from Alaskan waters, not counting that used for native food and for dog food, places the total valuation at $185,000,000 since we bought Alaska for $7,200,000. In one year ten fishing vessels alone pulled in 7,708,000 pounds of the choicest kind of fish. If the ordinary American were asked to guess how many people are permanently engaged in the fishing business in Alaska, the answer would probably be—about 200. As a matter of fact there are 18,000 men pulling up salmon, halibut and herring and storing them away in cans and ice houses. That number of men can make a big hole in anybody's fish pond; if the looting by the fishermen goes on indefinitely, there will be nothing left except the water presently."

Upon the heels of this comes an announcement from Washington dated November 26th, which says:

"Complaints against Canadian, Japanese and Russian fishermen invading Alaskan waters for halibut, have led Secretary Redfield to include in his estimates for the department of commerce an appropriation of $100,000 to purchase one sea-going vessel, one light draft tug and six rapid motor boats to enforce the alien fishing law. For additional employees he asks $85,000.

"The department now has no vessel to use for this purpose, and the secretary points out that when a government official has to visit an Alaskan cannery or fishery to see that the law is being observed, 'his only means of transportation is a boat owned or run by the very company or person that may be violating the law.'"

BIG HALIBUT TRIP.

During the week of November 15th, one craft landed a trip of 120,000 lbs. of fresh halibut at Prince Rupert. The whole fare was taken without dories by setting and hauling the lines from the deck of the vessel.

FAST PASSAGE BY LUNENBURG VESSEL.

Schooner Mayola, Captain Wentzell, of Lunenburg, recently made the passage from Lunenburg to Porto Rico in 9 days. This record has not been made for some time.

THE LOG OF A HIGH LINE HALIBUTER

By F. WILLIAM WALLACE

PHOTOGRAPHS BY THE AUTHOR

Of all the varied branches of fishing carried on by the fishermen of the Atlantic coast, there are none to compare with halibutting for excitement and pecuniary returns. Ordinary haddock trawling is hard work of unvarying monotony whether fresh or salt fishing; handlining for cod and hake is about the same, while mackerel seining is problematical as to monetary gain even after a two months spell at sea chasing the elusive schools from the Virginia Capes to Scatarie. Of course, there is halibutting and halibutting. Halibutting off the Cape Shore and Seal Island grounds in the whirl of the Fundy tides is hard work sometimes, especially when the gear gets "hung up" on hard bottom and every second hook has a dogfish wriggling on it, or the vindictive "blue dog" snarls himself up in the trawls and bites the lines into many parts as he struggles to free himself. When these pests of fisherman are not in evidence, there is always the fog—fog which can be reckoned with for most of the summer from Cape Cod to Cape Sable and from Georges to Western Bank, and Western to the Flemish Cap. Fishing in these ocean mists with the liners tearing through them is dangerous, and for the men in the dory there is always the chance of getting astray from the schooner.

But there are pleasant places for halibutting in summer. Places such as off the Island of Anticosti in the Gulf of St. Lawrence where there are no abnormal tides to contend with; no dogfish and very little fog compared with what there is to the east and south. With the desire to experience commercial fishing in such pleasant waters after rough spells in winter haddockers, the writer formed one of the gang who shipped with Captain John Apt in the Nova Scotian schooner "A. J. Lutz" bound from Digby, N.S. to the Anticosti.

Market fishing in Canada with the afore-mentioned pests and dangers to contend with is not lucrative from the fisherman's point of view and most Canadian fresh fishermen haul up for the summer months or turn their vessels into halibutters and exploit the grounds off the Cape Shore and from La Have to Western Bank. Captain Apt in the "Lutz" is the pioneer among Canadians to go halibutting in the Gulf of St. Lawrence—in fact we were the only Canadian vessel halibut fishing up there, though the Gloucestermen have fished the Gulf grounds for many years.

On May 6th, the 95 ton, McManus designed semi-knockabout schooner, "A. J. Lutz" left Digby for the Anticosti grounds, via Canso and the Magdalen Islands. We carried eight double trawl dories and a specially built gasolene power dory equipped with a Mianus 3 H.P. make and break engine. The ordinary dories were carried in the usual manner—nested in fours upon the starboard and port sides of the main deck amidships. The gasolene dory was carried on the port rail while fishing, and swung inboard on the quarter while making a passage.

With the skipper, cook, and myself, there were the gang for eight dories, making a total complement of nineteen men. Nine of us, including the skipper, bunked aft in the cabin, the rest were quartered in the forecastle. Nearly all our gang were old halibut killers, and without exception, deep sea fishermen of the best class—steady, respectable, intelligent men and splendid shipmates.

We left Digby in the morning, and as the breeze was fresh and a trifle squally we kept the light schooner uner her four lowers—mainsail, foresail, jumbo or forestaysail, and jib. After getting clear of the wharf, the decks were cleared up, stores and spare gear stowed away, and the regular routine of sea life aboard a fishing vessel was commenced—one man to the wheel, another to the look-out and the rest below decks overhauling and preparing their fishing gear.

Two men go to a dory and each prepares half of the gear to be used. Halibut trawl is rigged in "skates" consisting of six or seven "shots" of 28 lb. tarred cotton line. Each shot is 50 fathoms in length and a six shot skate consists of 300 fathoms or 1,800 feet. Into this 28 lb. ground line are hitched small loops or "beckets" at intervals of 2 fathoms apart, and to the beckets are bent the gangins or snoods—6 feet of 14 lb. tarred cotton line with a heavy Mustad's No. 6283 Halibut hook seized to it. Thus, to each skate of 1,800 feet of halibut trawl there is an average of 138 gangings and hooks. This gear is coiled down upon a small square of painted canvas and from each corner of the square there is a short length of rope. When the whole skate is coiled down, the four ropes are used to tie the gear up. As the hooks are rigged so far apart of such a large size, the gear is not so easily snarled up like the finer cod and haddock trawl which has to be coiled down in tubs.

The Island of Anticosti is approximately 130 miles long by 40 miles wide and lies about north and south in the mouth of the Gulf of St. Lawrence The Island is private property and is owned by the

estate of the late M. Henri Menier—the French chocolate manufacturer. The place supports a small population of about a thousand souls in the settlements and lobster factories along the south shore. The north shore and interior are uninhabited, and in winter the Gulf ice hems the Island in on all sides and effectually cuts it off from outside communication. For many years, the kelp covered limestone bottom of the waters around Anticositi have been favorite spawning spots for the halibut in the summer, and the vessels engaged in halibutting fish the coast, following the halibut in from the deep water as they migrate inshore.

As this was the first trip, a great deal of work had to be done on the trawl gear before we were ready for fishing. Old trawl had to be overhauled and new beckets, gangings, and hooks put on in the place of those frayed, worn out, or rusty. Dories had to be fitted with the hundred and one small articles necessary for the capture of the mighty halibut, and from the time we left the home port until we made the "Anticoast" all hands were

Outward Bound for the Anticosti. Digby Schooner "Albert J. Lutz" High Line Atlantic Halibuter for Canada, 1913.
(Photo, Yates, Digby)

busy rigging trawls, making skates, seizing spare hooks, preparing buoys, lines, gurdy winches, anchors, bailers, halibut gaffs, gob sticks, and "killers." The latter is a stout club of hardwood, not unlike a policeman's baton, used for the purpose of quieting Mr. Halibut before he can be safely taken into the dory.

By nightfall, all hands had settled down into the familiar routine of sea life aboard a fisherman making a passage. The gang arranged their bed-places and the double bunkers tossed for the right to sleep on the outside of the berth; shore clothes were folded and put away in suit cases; old clothes were donned, and the main topic of conversation, fore and aft, centered on halibut and the chances of finding them in shoal water so early in the season.

Wednesday, May 7th.—The wind lightened after midnight and a regulation Bay of Fundy fog shut down very thick. After breakfast at 6 a.m. we heard the fog alarm of the Lurcher Lightship sounding on the starboard bow. From then until four in the afternoon we lay slatting and rolling in the fog becalmed. The breeze came away fresh at five and we swung the vessel off through the "Hospital"—the tortuous, ledge strewn channel between Seal Island and the Cape Sable shore. 9 p.m. Seal

We Spoke a Small Schooner off Sambro.

Island light, Blonde Rock and Cape Sable lights visible ahead and astern, and by midnight we passed the Cape; rounded Brazil Rock buoy and laid our course for Little Hope.

Thursday, May 8th.—6. a.m. Wind, N.E., Fine, fresh and clear. Set stays'l and balloon jib. Nova Scotia coast visible on port hand. Overhauled and passed American schooner "Tacoma." Noon. Passed Little Hope. 5.30 p.m. Passed Ironbound Island; wind baffling; light airs; vessel becalmed at intervals. Midnight. La Have and Ironbound lights in sight.

Friday, May 9th.—6.30 a.m. Light airs, sea smooth. Vessel off Sambro and just making steerageway. Spoke small schooner dory handlining at 10.45 a.m. He gave us Sambro bearing 18 miles N. by W. Noon. Barometer falling—29.7; sky overcast, breeze freshening. 6 p.m. Logged 57 miles since speaking schooner; wind coming away strong from S.E. with rain, 8.30 p.m. Took in staysail and balloon jib; water aglow with phosphorus; bitterly cold. 10 p.m. Jumbo jig parted. Turned out and swayed up on halliard; dirty night.

Saturday, May 10th.—2 a.m. Run our distance by log. Snowing heavily, and as Canso is a dangerous place to enter on a dirty night, all hands turned out; took in jib, and with jumbo aweather, wheel hard down and mainsheet started, the schooner jogged until 7 a.m. when we raised the land and swung in. 9 a.m. Misty, raining. Passed Cranberry Island, vessel under all sail. Took in stays'l by Mackeral Rock; took in balloon and jib off Grassy Island. 10 a.m. Tied up to Maritime Fish Corporation wharf, Canso, and commenced loading ice. Thirty-three tons aboard by supper time.

Sunday, May 11th.—Blowing a gale of wind and bitterly cold. Barometer down to 29.5. Alongside wharf all day.

Monday, May 12th.—6 a.m. Sky overcast, cold, strong breeze from N.W. 9.30 a.m. All hands get underway. Towed out through Hart's Island Passage by tug "Inverness." Hoisted sail and let go tow line. Beating up Guysboro' Bay under four lowers with scuppers awash. 3 p.m. Breeze squally. Beating up the Straits of Canso bound for the Magdalen Islands to procure herring bait. Tacking ship every ten minutes in the narrow passage. 4 p.m. Off Port Hawkesbury. As nothing would be gained by making for the Magdalens against the head wind and heavy sea prevailing in the bight of the Gulf, we rounded in among the fishing fleet at anchor in the port and let go the hook. A number of American halibutters in port including such fine craft as the "Catherine Burke" and "Atlanta" of Gloucester; "Elsie" of Boston, and Lunenburg salt fishermen "Mary F. Flemming," "Delawana" and "J. B. Young." All the fleet are bound for the Magdalens for their first herring baiting, and the talk ashore and among the gangs is discussing the trap news from Amherst, Grindstone, House Harbor and Grand Entry.

Tuesday, May 13th.—6 a.m. Dead calm, fine sunny. 8 a.m. Light airs in the Straits. "Cath erine Burke" underway but drifting astern with the tide. An hour later, the breeze freshened, and simultaneously the harbor began to echo to the clink and clank of windlass pawls and creaking sheaves as all the fleet commenced breaking out their anchors and hoisting sail. 10.30 a.m. All the fleet standing to the west'ard, coasters and fishermen, altogether, twenty three sail. Passing Cape Porcupine, the whole fleet were bunched together and all afternoon it was a neck and neck race through the narrow Straits with the vessels manoeuvering for the best berths. There were occasions when a dozen vessels would be in parallel range with each other making what fishermen call "an awful snarl of canvas." With every stitch of sail set, they jibed and tacked around one another looking for the heavier airs coming off the hills. 6.30 p.m. Wind freshened from the S.E. and our vessel, though smaller than the big Lunenburgers find Gloucestermen, hauled on the heels of the "Catherine Burke" and left the rest of the fleet astern after passing Port Hastings. 7 p.m. Clear of the Straits. Fine sailing breeze. Raised the sails of the fleet from the Magdalens and five Lunenburgers passed us, loaded with their first baiting; lee rails awash, all sails piled on, and bound for the eastern banks. 9 p.m. Fine moonlight night, fresh S.W. wind. The "Burke" ahead, and "Mystery" on lee beam. Heading for Grand Entry, Magdalen Islands.

Wednesday, May 14th.—How quickly the weather changes in these northern latitudes. On turning out at 5 a.m. for breakfast, we found the schooner driving through a dense fog in a fresh

breeze; lee rail awash and spray flying. The Gloucester schooner "Mystery" still holding on our lee quarter. All hands on deck skinning their eyes for the Islands. 7 a.m. Someone reported hearing the breakers, and with startling suddeness, Grand Entry Island—a huge block of rock 530 feet high—loomed out of the smother a scant cable's length away. Hauled vessel to N.W. after passing the Island and kept a look-out for the fleet. Wind squally, heavy swell. Took a sound and found water shoaling to four fathoms. Thick as mud with fog. "Mystery" anchoring. 8.30 a.m. Took in light sails; down jib and jumbo; down foresail. Rounded up and let go port anchor and manilla riding cable in 3½ fathoms. 9 a.m. Gloucester schooner "Olympia" swung out of the fog and tacked on our weather. This vessel was run down by a steamer on Western Bank this summer and the skipper and five of her crowd were drowned. 10.30 a.m. The fog lifted as suddenly as a curtain and disclosed the land of Amherst Island about 3 miles away. Around us lay thirty vessels at anchor—all waiting for the fog to lift in order that they may get inshore to the herring traps. Hoisting sail again, we broke out and stood in to the anchorage off Amherst Harbor, and on the way in picked up the skipper and four men of the French three mast topsail schooner "Angeline" of St. Servan, who were pulling ashore in a dory. They came aboard and expressed their admiration of our schooner and the way she handled. They left their home port in France on April 3rd and had just arrived for their bait before fishing on Grand Bank. 11 a.m. Came to an anchor again, and hoisting out a dory, the skipper and I went ashore to see about procuring bait. Found no bait at Amherst Islands, so went to telegraph office and tried to find out the news from the other islands in the vicinity, but as the wires were down, we could learn nothing. Beach gossip says that bait is plentiful at Grindstone.

Amherst Harbor is a bleak, treeless, village consisting of a straggling street of houses and shacks built across a bar between two windswept hills; inhabitants are mostly French Canadian and French is the language spoken. The Islands are important for only two industries—lobstering and baiting the Bank fishermen. The herring in their mighty migrations along the coast strike inshore around the Magdalens to deposit their spawn from May to June, and the inhabitants trap them in nets by the million. As bait, the Magdalen herring are considered superior to the Prince Edward Island variety, and are much sought after by the fishermen. For the period of six to eight weeks during the herring season, the "lonely Magdalens" are crowded with the vessels at anchor in the bays, and the straggling streets of Amherst and House Harbor and the wind swept beaches are crwded with the oil-skinned gangs from the Banking fleets. 10 p.m. Blowing a S.W. gale. All evening the vessels have been running in for shelter and the roadstead off Amherst is ablaze with the riding lights of fifty vessels, and the Bay presents the appearance of a town. The roar of the breakers on the weather side of the Island mingles with the shriek of the wind through the rigging, and every now and again comes a wind muffled hail from out of the darkness; "What vessel's that?" as some shore-ranging gangs endeavour to locate their schooner.

Thursday, May 15th.—Snowing during the night. Roused out 4 a.m. to get underway for Grindstone Island. Fresh, N.W. breeze, bitterly cold. Hoisted four lowers and swung off for Grindstone with other vessels following. 7 a.m. Off Alright Island, a trap boat sailed out and hailed us. Herring struck in during the night and their traps were full, so they piloted us in to an anchorage off House Harbor and we dropped the hook and hoisted the dories out. With two men in each dory, they pulled up to the trap net anchored and buoyed close inshore, and the live herring were scooped up in huge dip nets and discharged, squirming and gasping, into the dories. Nine dory loads were dumped on the schooner's decks, and we turned to and packed them in chopped ice in the hold pens. Herring bait is sold by the dory load—eight dollars a load. The herring, being full of milt, were very dirty to handle, and by the time we had them stowed away on the ice, we were literally "blinded in scales," and for days afterwards, we spent odd moments picking the scales off boots and oilskins. 10.30 a.m. Bait all aboard. Up anchor, made sail, and swung off "Anticosti Ho!" All the fleet getting baited as the herring struck in heavy along the lee shore of all the Magdalen Islands. 8 p.m. Bird Rocks astern,

Cape Alright, Magdalen Islands.

Heavy swell from N.W. Cold; overcast sky; snow squalls at intervals.

Friday, May 16th.—At two o'clock this morning we had a succession of snow flurries and the decks were covered with snow, but with the dawn at 8.30 a.m. the weather cleared. 8 a.m. Set the light sails, and headed on course for Heath Point, Anticosti. Noon. Took a sextant sight and made position of vessel by observation 48°55′ North latitude, which with log puts us at 18 miles south of Anticosti. Went aloft to verify my sight and made out the land ahead. 3 p.m. Wind light. Spoke American schooner "Mystery" halibutting off Heath Point. 4 p.m. Breezing up from east'ard. Bitterly cold. Let go anchor in five fathoms two miles to west of Heath Point lighthouse. Launched a dory and pulled ashore to visit lightkeeper. Inspected mechanism of lighthouse with Mr. Huber, the keeper. The original tower was constructed of solid stone in 1835, but latterly a reinforced concrete addition has been made to the building makit 35 feet higher. The light is a revolving flash, and the apparatus, which was made in France, cost $35,000. The keeper has two assistants and from sundown to sunrise they tend the light—winding it up every two hours and pumping the oil. In foggy weather, cotton powder bombs are exploded every

fifteen minutes, and every five minutes when vessels' signals are heard in the vicinity. As there is a dangerous reef off the point and the Montreal bound liners coming through the Straits of Belle Isle pass close to it, the light is a very important one.

While we were there, the Straits were blocked with ice, and consequently no steamers came within range of Heath Point except the Government tenders, an occasional steam coaster trading along the Anticosti shore, and the ubiquitous fishing vessel.

As a place to reside for even the summer, Heath Point does not appeal to one. The lighthouse is

Taking Aboard Herring Bait at Magdalen Islands.

built on a long, low muskeg covered point—treeless windswept, and bleak looking. Under the spongy moss which forms the top soil of this portion of Anticosti is the solid limestone rock of which the whole Island is composed. A cow has a hard task to find any succulence in the rank grass which grows around the lighthouse, and as a rule, all the animals kept at the place live for a year and then die. It is impossible to keep a cow any longer.

As the keeper lives in the place the year round, his life in winter must be a trifle lonesome, although he assured me that he did not find it so. His nearest neighbour is the keeper at South Point, 35 miles away, and in winter, when the Gulf of St. Lawrence is a solid sheet of ice, both keepers and their families vary the monotony by hitching up their dog teams and visiting one another. There is a telephone line between the lighthouses and it is possible for Heath Point to have a yarn with West Point, 130 miles away.

While looking over the peculiar semi-circular rooms in the lighthouse, my eye was taken with the handsome linoleum floor cloths decorating the various apartments, and I was greatly surprised to find that they were all hand painted. "Yes," explained Mr. Huber, "I made them all myself in the winter evenings. I take a piece of canvas; give it a body coat and draw out the designs and paint them in." Some of the designs were really beautiful, but one would need to live in a lighthouse to undertake such a work of painstaking monotony.

Before we pulled off to the vessel, we paid a visit to the Marconi station, and the gentlemen there showed us over the plant. They live upon the Island during the summer St. Lawrence season from April to December, but last year the relief steamer was unable to take them off and consequently the operators were marooned for the whole winter.

After sundown a wet, misty rain commenced falling, and escorted by a pack of tail-wagging husky dogs we stumbled and splashed over the rough muskeg trail to the dory and got aboard.

(Continued in the next issue.)

FISHERMAN'S WEATHER RHYMES.

Quick rise after low
Indicates a stronger blow,
Long foretold—long last,
Short notice—soon past.

When the glass falls low
Stand by for a blow;
When it slowly rises high
All the light sails you may fly.

When clouds are gathering thick and fast
Keep sharp lookout for sail and mast;
But if they slowly onward crawl,
Out with dories, nets or trawl.

Mackeral sky and mares' tails
Make lofty ships carry low sails;
Wind which shifts against the sun,
Trust it not, for back it will run.

When rain comes before the wind
Dories, gear and vessel mind;
When wind comes before the rain,
Soon you'll make the set again.

Evening red and morning grey
You're sure to get a fishing day;
But evening grey and morning red,
May bring a gale of wind instead.

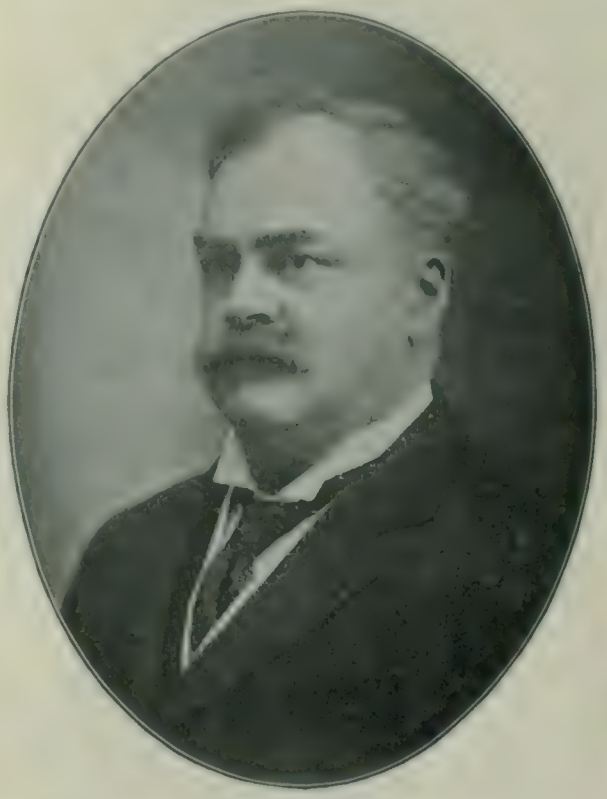
FISH AND FISH FARMING.

At a time when complaint is made of the scarcity and high price of meats, there should be interest in anything that promises to increase the supply of fish for human consumption. Much has been learned by observation of the habits of fish and something has been done to maintain if not to increase the available natural supply by regulations as to when and how particular kinds may be taken. Fish hatcheries have also been established and many millions of fry distributed in the waters of the country. It has been sometimes thought that the results of this latter labor were not as great as could be wished. A reason for the alleged failure is suggested in a paper on the insect food of fresh water fishes, by Dr. C. Gordon Hewitt, Dominion entomologist, reprinted by the Commission of Conservation. Mr. Hewitt opens a wide field for study, and suggests a reason for the phenomenon sometimes noted of nearby and even connected lakes being frequented by different kinds of fish. Brook trout and some other kinds of fish live almost entirely on insects and their larvae. There are an immense number of varieties in larvae and, seemingly, each variety of fish has its favorite food. The physical and chemical conditions of the water of a lake or stream will affect the larvae and insect life therein, and what does this in turn affects the fish life. It is possible, therefore, that, without study, fish fry may be put in waters where they will surely die; and so time and labor will be wasted. Mr. Hewitt in the course of his argument digressed naturally enough and said something about fish farming. The Government stations which gather and distribute fish fry are in their way fish farms, and the great expense of inland fresh waters of Canada, as well as sea waters, suggests that they may in time play an appreciable part in providing a food supply for the people. Fish farming, however, can be carried on in a smaller way in every section of the country almost, where there are brooks and low lying or wet lands. A dam that will create a pond is often all that is required, and if the site is well chosen the result may be satisfactory in more ways than one. There is so much other waste on this continent that wasted water is little heeded. The suggestions of the paper in this latter regard are for the future and the man with theories out of the common run, who can venture into new fields, and who, often, is a leader of his fellows in good.

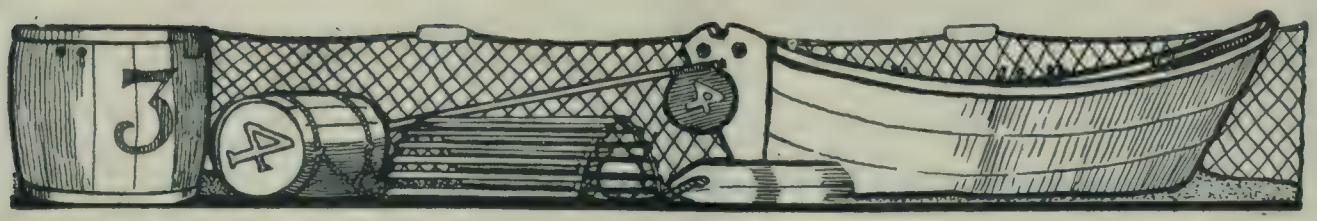
WHO'S WHO IN THE FISHING WORLD.

The Honorable John Douglas Hazen, Minister of Marine and Fisheries, is a "Downeaster" by birth, having been born in Oromocto, Sunbury County, New Brunswick, in 1860. Educated at the school and University of New Brunswick, Fredericton, Mr. Hazen studied law and was called to the Bar in 1883. During the succeeding years he took an active interest in politics, and after holding the offices of Alderman and Mayor of Fredericton for several years, he removed to St. John and was from there returned as member for the city in the House of Commons during the general election of 1891. In 1899, 1903, and 1908, he was elected to the New Brunswick Legislature as member for Sunbury, afterwards becoming Premier and Attorney-General for the Province in 1908. When the Conservative Government went into power in 1911, Mr. Hazen was chosen as Minister of Marine and Fisheries for the Dominion.

Mr. Hazen's interest in the fisheries since he took over the portfolio has been an active one, and coming as he does from one of the sea girt provinces, he is probably one of the best informed of the many Ministers who have presided over the Fisheries Department. An enthusiastic amateur fisherman himself, he has gone to a great deal of trouble to get acquainted with the conditions of the commercial fisheries of Canada. Last summer, he made an extensive tour of the British Columbia coast, and as a result of his trip, he has made an arrangement for a survey to be undertaken of the Pacific fisheries with the object of development. Since he took over the Fisheries Department, he has realized how much depends upon the co-operation of the fishermen and the trade with the Government in promoting the welfare of the fishing industry, and with this object in view, he organized the Fishery Advisory Board—a committee of practical men from the various provinces—to suggest ways and means for the progress and development of the Dominion Fisheries.



It would be a hard task to get a man who has served a time in the dory handling trawl or twine to fill the office of Minister of Fisheries, but Mr. Hazen, though he can not lay claim to ever having been a trawl hauler, is a native of a province which breeds good fishermen, and he loses no opportuuity of educating himself in the practical business of the fisheries. With men of this class in command of the Department, those in the trade will find in Mr. Hazen, a man who will do his utmost to further their wishes without throttling the welfare of the fisheries and the fishermen by political prejudices.



THE ATLANTIC FISHERIES

CANSO, N. S.

(From our special correspondent.)

The Dogfish Reduction works closed for the season on December 2nd. The product of the season's work including 400 barrels of oil has all been sold. It is thought here that the plant would be still more valuable to the fishermen if its capacity were doubled, so that the works could handle all the dogfish brought in during the height of the dogfish season. There is a good demand for the fertilizer and oil manufactured by the plant.

Rough weather throughout December has interfered with the work of the local fishing fleet, but towards the end of the month fishing improved and good fares were brought in. On December 29th the local fleet landed a day's fishing of between 275,000 to 300,000 pounds.

The steam trawler "Caulonia" under command of Captain Olsen left on December 26 for Grimsby, England. The Caulonia" has been trawling under charter to the Maritime Fish Corporation, Ltd., since early Spring, and has had a very successful season. Three Grimsby steam trawlers have been operating in the North Bay and off Scatterie this season. Two of these craft, the "St. Leonards" and "Carmania," under charter to the North Atlantic Fisheries Co. at Port Hawkesbury, made some remarkable hauls and have returned with high line stocks to their credits.

CHATHAM, N.B.

(From Our Special Correspondent.)

In this section, there is a large amount of capital, and a large number of fishermen, engaged in the smelt business. The legal fishing season is from January 1st to February 15th, and from December 1st to December 31st. The smelt business on the whole has been satisfactory and the fishermen have done fairly well. Prices on the American market, to which the fish are chiefly exported are also fairly remunerative. Considerable quantities of smelts are also used on the Canadian market. Regarding salmon fishing, would say that the catch this year was more than the average and was remunerative both to fishermen and dealers.

The lobster fishing was much less than the average one this year, and while prices were the highest known to the trade, the increased trade did not make up for the shortage in the catch. The fishing trade in this section is in a healthy condition, with the exception of the lobster business. The lobster packers find it very difficult to make a profit on their factories, owing to the shortage in the catch of fish. Fishermen and dealers in this section expect to receive higher prices for their fish on the American market on account of the duty on fish having been removed by the American authorities.

DIGBY, N.S.

(From our Special Correspondent.)

Digby, N.S., December 29th, 1913.

Bait as usual, is scarce at the port, but the Digby vessels after landing their fares here, run across the Bay of Fundy to Grand Manan, where bait is plentiful, the Digby fleet experiencing no delay in this respect. Fish fares are good and all the vessels have made good stocks.

We are pleased to state that there has been no casualties among the Digby vessels, during the year 1913, neither loss of life nor property.

December shipments of Finnan haddies and various other fish from this port have been greater than any previous December in the history of Digby's wholesale fish business, one firm alone having shipped $4,500 worth more this month than last December.

The month's imports reported by the firms are as follows: Maritime Fish Corporations, 230,426 lbs. of haddock, 67,537 lbs. of hake, 6,68 lbs. of cod; Joseph E. Snow, 1,690 lbs. of haddock, 1,245 lbs. of hake, 566 lbs. of cod, 10,000 lbs. of mixed fish; D. & O. Sproule, 9,126 lbs. of mixed fish; Nova Scotia Fish Company, 16,000 lbs. of mixed fish.

Prices for bait have been extremely high, reaching $35.00 per hogshead. After the sardine season closed the price suddenly dropped to $10 per hogshead, which is considered an average figure by our fishermen. The price paid per cwt. for fish at this port averages about as follows: fresh haddock $3, cod, $2, hake $1 to $1.25, cusk $1.25 to $1.50.

Lobster season in this county does not open until January 15th. The 'Winkle business is better than the average. These shelled fish are generally gathered up by children. The wholesale fish firms at present are unable to obtain a sufficient supply to fill their orders.

The clam business is good and large shipments are going forward by the Whale Cove Trading Company, a firm which makes a specialty of this branch of the trade.

Taken as a whole, the past year's business at this port has been good, catches have been up to the average with average prices. The wholesale fish business is one of Digby's biggest assets and everything points towards a bright future, for the business at this port.

HALIFAX, N. S.

(From our special correspondent.)

The fish trade in Halifax for the past year is regarded as being decidedly prosperous. While the fares landed have not exceeded the catches of other years, yet the values and prices paid have been high—in salt codfish alone the price has reached

$6.50 to $7 per quintal. The catch amounted to around 210,000 quintals, of which at least 40,000 quintals consisted of hake. The scarcity of codfish caused a rise in the price of hake and the Bankers filled out their trips with the usually despised fish. The market for haddock and pollock has been active and prices high throughout the season. The mackerel season has been good—especially the unusual Fall run which struck in along this section of the coast during November. One St. Margaret's Bay gang netted $5,000 worth within a week, and many of the shore fishermen who were counting on a poor year in the shore fishery were enabled to turn the luck with the mackerel run. The business in canned lobsters was poor for the canners even though the markets for the product was better than ever.

The passing of the U. S. free tariff on fish has caused a revolution in the fishing industry here and prospects for the future are decidedly rosy.

LUNENBURG, N.S.

(From our Special Correspondent.)

The fishing business of 1913 of the Lunenburg fleet has, on the whole been quite satisfactory, as far as the vessels' business is concerned, the total catch for the season amounting to about 211,400 qntls. with 121 vessels engaged. The prices in the spring opened at about $6 for cod and $4 for haddock, while for the summer catch the prices obtained were $6.50 for cod, $4 for haddock and $3 for hake, at which prices most of the catch was disposed of. Some of the fleet, however, holding out for higher figures obtained from $6.60 to $7 for cod and from $3.10 to $3.70 for hake. Of the latter this season there are about 40,000–or 50,000 qntls. landed by the fleet, which was very unusual.

In comparison with the above the catch for the year 1912, amounted to 211,000 qntls. with 136 vessels engaged. The prices, however, were very much lower, as the spring catch sold for $4 per quintal, while the summer catch opened at $6.25, but fell off to $5.75 and $6 later in the season, so it is evident that the present year has been much more profitable for the vessels engaged in the business.

The shore fishing on the whole has been fair, the Lobster catch helping the fishermen out quite a bit. This fall the mackerel catch has been better than it has been for some time, also proving a good thing, while the codfish, owing to the scarcity of bait and fish on the fishing grounds, was not very profitable, especially for the smaller boats, as they were not able to go far from the shore to strike the fish, which are off in deeper water, thus giving those, who are fortunate enough to have larger boats the advantage in their being able to go farther to make their catch.

There are no facilities in the county for storing any quantity of bait, but for the vessels, who go on the Banks for deep sea fishing, this is not a great draw back to them, as the supply at Magdalen Islands in the spring was good, and that on the Newfoundland Coast was quite ample, so they had no difficulty in that respect.

The boat fishing on the other hand depends on the bait got from nets and traps on the coast, while some use bait from Lockeport and other places in the Province.

There have been no casualties to vessels during the season, as all the vessels that left for the fishing grounds returned safely home. There were three or four men lost among the crews engaged, caused by the up-setting of dories, etc., which considering the men employed—an average of nineteen men to each vessel—is the cause of much thankfulness.

As the large part of the fish caught by the vessels in the county are sold to Halifax shippers for export, it is difficult to get a correct idea of the value of the imports and exports of the county. At present these figures are not available, as the returns are not made until after the end of the current year.

NEWFOUNDLAND FISHERIES.

According to the St. John's "Trade Review," the shore codfishery of the Island amounted to 850,000 quintals for the year 1913. The fish brought home from the Straits and Labrador and made and sold as shore fish was about 150,000 quintals—making 1,000,000 quintals which might be called shore fish. All this fish was very well made owing to the fine weather that prevailed, and the amount of cullage and West India thrown out was very small. As this fish sold from $6 to $6.80, it is safe to figure $6.25 as an average for all grades, so that the aggregate value of the shore fishing for 1913 amounted to $6,250,000. The returns of fish shipped from Labrador show 111,876 quintals, as against 194,995 for 1912. The value of Labrador fish shipments in 1912 was $68,482.50; the present year the figures were $525,817.00.

The bankfishery for 1913 amounted to 153,000 quintals; last year the catch was roundly 155,000 quintals. This year there were 105 schooners employed in the bankfishery; last year there were 124. This year's tonnage was 7,238; against 8,696 last year. The crews stood 2,065 men last year; 1,829 this year. The average catch per vessel was 1,254 quintals last year, and 1,462 this year. The average catch per man was last year, 75¼ quintals; this year, 83¾ quintals. It will be perceived that there were nineteen bankers less engaged in the fishery this year, and we note the falling off as follows: St. Laurence, 1 less; Catalina, 1 less; Heart's Content, 1 less; Harbor Breton, 5 less; Fortune Bay, 4 less; Belleoram, 5 less; Grand Bank, 1 less; and Garnish, 1 less. The reason assigned for the falling off in the number of vessels employed in the Bank fishery, is the difficulty to get crews at prices that owners of schooners think will pay.

The lobster pack for 1913 has been the smallest on record. Statistics available place the pack at about 20,000 cases, which at $22.50 per case—the highest price ever paid for them—gives a value of $450,000. The decrease in the size of the pack is blamed on the violations of the lobster fishery laws, and unless they are fully carried out the lobster is doomed to extinction. The exports for 1913 amounted to 15,827 cases as compared with 24,869 cases in 1912.

Codfish Exports for 1913.

From the first of January to end of December, we shipped from St. John's 997,992 quintals of codfish. We sent to Portugal during 1913, 68,504 quintals; in 1912 we shipped to the same country

49,968 quintals—a gain for the year closing of 18,536 quintals. Spain took from us during 1913, 131,732 quintals, or 38,040 quintals more than in 1912, when the figures were 93,692. To Italy we shipped during 1913, 126,357 quintals, while the year before we shipped 112,765, which shows a gain for 1913, of 13,592. The British West Indies took 71,414 quintals of our fish in 1913, while in 1912 they took 85,512—a loss on the year just closing of 14,098 quintals. Brazil shipments are very much ahead for 1913. The figures for the two years are: 1912, 391,297 quintals; 1913, 470,141 quintals; the difference in favor of the current year being 78,844. Canada shows a decrease of 24,466 for 1913. The records for the two years are: 1912, 38,073; 1913, 13,607 quintals. England took twice as much of our fish in 1913 as she did in

An Old Grand Banker. Cod Scaling 90 pounds.

1912. Here are the figures: 1912, 3,161 quintals; 1913, 7,864 quintals. Scotland did not take any of our fish in 1913 and only 7 quintals in 1912. United States shows a decrease of 9,275 quintals for 1913. The two years stand: 1912, 22,632; 1913, 13,357 quintals. Other parts increased by 32,047 quintals for the year closing.

Salmon and Herring Exports.

Salmon exports show an increase this year, thus: 1912, 3,470 tierces; 1913, 3,930 tierces.

We shipped more herring (salted) in 1913 than in 1912, by 4,164 barrels. The figures for the two years are: 1912, 24,229 bbls.; 1913, 28,393 bbls.

Seal, Fish and Whale Oils.

SEAL OIL.—During the year, we shipped 2,971 tons of seal oil, of which 2,314 tuns went to Great Britain, the rest to "Other Parts" The year before we sent out 2,449 tuns—a gain for the current year of 522 tons.

COD OIL.—During 1913 we shipped 3,677 tuns of cod oil. This year before we sent out 2,626 tuns a gain for 1913 of 1,1051 tuns.

CODLIVER OIL.—The high price of livers, and the low price of the finished product, cut down our refined oil exports very considerably this year. The figures for the two years are: 1912, 137 tuns; 1913, 51 tuns—a drop of 86 tuns.

WHALE OIL.—We shipped less whale oil in 1913 than in 1912. These are the figures: 1912, 1,457 tuns; 1913, 809 tuns—a falling off of 648 tuns.

On the whole, 1913 has been a prosperous year while prospects for the future are decidedly bright. Reliable authorities foresee a great business in fresh fish between Newfoundland and the United States. With the U. S. markets, but four days sail from Newfoundland fishing grounds it is expected that vessel owners and fishing skippers will go into the fresh market fishing and run their trips to United States ports instead of salting and drying their catch for home markets.

Newfoundland Frozen Herring.

Reports from Curling, Bonne Bay and Bay of Islands state that the herring fishery promises well. With good hauls and plenty of frost, a large fleet of American and home vessels have made quick loads and cleared.

PARKER'S COVE, N.S.

(From our Special Correspondent.)

The lobster fishermen had a very good season this spring. For the two months of May and June, there were about 54,000 caught, worth between $9,000 and $10,000. There were 3,000 qtls. of hake caught, which brought $3 per qtl.; also 280 qtls. of cod at $4.50. The summer fishing would have been much better if they had been able to get enough bait, but since the 15th of October they have not been able to get any. Last year at this time, the boats had landed $1,100 worth of fresh fish, but so far this year, it has been a failure as they have not landed more than $200 worth.

Our lobster season opens in January, but on account of drifting ice and the rough shore, we are not able to do any thing at fishing until the 15th of April, which gives us only two months and half until it closes on the 1st of July. We should have in addition to these two and a half months, the month of September and October. This would only give us four and half months, whereas the South Shore men have five and a half months. They also have the benefit of the high prices prevailing in the later part of the winter.

PORT ELGIN, N. B.

On December 26, 1913, the Port Elgin Fish Company have exported 25,000 boxes of smoked bloaters containing about 100 fish each to New

York. It required thirteen cars to carry this one consignment. Over nine thousand dollars was spent here for these fish, which were all taken in about three weeks time. The highest catch made by one fisherman amounted to $280, which is not bad pay for about twenty days' work.

The Young Bros. Company of the town also loaded two cars of 3,300 boxes for the New York market.

PRINCE EDWARD ISLAND.

(From Our Special Correspondent.)

Official statistics for the year just closing are not yet available, but a fairly accurate estimate of the value of the annual fish harvest may be made from the figures for 1911-12, a few of which are as follows:

Lobsters	$831,519
Cod	82,813
Herring	70,067
Smelts	39,816
Clams and quahaugs	32,372
Mackerel	33,360

These with other varieties in smaller quantities, make with the above an aggregate of $1,196,396.

When the figures for 1912-13 are published, it is expected that the total will be considerably more than that for the previous year. Mackerel during the past summer were taken in quantities unparalleled during the previous twenty years. The value of the year's mackerel catch alone will, it is estimated, approximate $100,000.

LOBSTERS.—It will be seen from the above figures that lobster is the most valuable of Prince Edward Island fish. The lobster canning industry has been carried on for some thirty-five or forty years, and, although it is quite evident that the supply is diminishing, the annual catch has varied but little in the last decade. This is shown by the following statistics, giving, from official sources, the quantity packed and the values:

Year	Cases	Values
1904	48,654	$583,850
1908	45,471	545,656
1909	47,693	572,322
1910	46,977	689,719
1911	51,693	831,519

The comparative uniformity in the annual catch for those years is due to the improvements added yearly to the fishing outfit rather than to any constancy in the supply of fish. The great majority of fishermen are now provided with gasoline boats, more and better traps and much better gear generally than had been used formerly, while the increasing value of canned lobster has greatly stimulated the efforts of the packers as well as of the fishermen. During the fishing season the Island is surrounded by a practically unbroken cordon of lobster traps, and every lobster of regulation size is taken year by year—and very many that would not stand legal inspection—so that the supply for each season depends upon those only which attain to sufficient size to be held by the traps.

That commercial extinction threatens the lobster industry under present conditions is generally admitted and efforts to ward off, if not prevent, such a misfortune, have been many and varied. Regulations as to the size of lobsters to be taken, length of fishing season, etc., have been made and improved upon from time to time and doubtless with good effect, yet the never-ceasing and often indiscriminate slaughter is making itself seriously felt. Lobster hatcheries have been established at different points in the Gulf, but there is a growing opinion that the results from these have not been commensurate with the cost and have not noticeably increased the supply of lobsters.

In view of this the idea is steadily gaining ground that natural nurseries should be set aside for the propagation of this valuable fish, nurseries that would at the same time provide suitable spawning grounds, be comparatively free from the natural enemies of the lobster and afford a plentiful supply of food. Richmond Bay on the north side of the Island would, it is believed, afford such a nursery. Like the other fishing grounds this bay has been practically fished out. There are several lobster factories along its shores which in years gone by drew from its waters all the lobsters they could handle. In late years the supply has fallen almost to the vanishing point. The theory has been advanced that the closing of the Bay against lobster fishing would help materially to solve the problem of conservation, not only for lobsters but for oysters. It is known that, next to man, the cod is the greatest enemy of the lobster—and the cod never enters Richmond Bay. It is known, also, that the star-fish, the great enemy of the oyster is the favorite food of the lobster, Richmond Bay once teemed with lobsters, its shallow waters and eel grass bottoms making an ideal spawning ground; and the exclusion of enemies, by sea and by land, would enable them once more to multiply and replenish the Bay.

Such a course as this, in view of the great benefits anticipated it is urged, would justify the purchase by the Government of the factories now established along the shores of the Bay, and, prohibiting for a term of years, all the lobster fishing within its limits. The overflow from the natural nursery would restock the shores along the North side of the Island, and at the same time, tend greatly to hold in check the star-fish, the great enemy of the oyster.

OYSTERS. The steady decline in the annual oyster harvest has for many years pointed to the ultimate complete depletion of the famous oyster beds in which the Malpeques, Curtain Island Cups, and Bedeques were produced in almost unlimited quantities and the supply of which once appeared to be inexhaustible.

The following figures reproduced from official statistics will show the extent of this decline during the past thirty years and the reality of the fear of complete extinction:

YEAR	BARRELS	VALUE
1882	57,042	$171,126
1892	32,937	98,811
1902	20,334	81,336
1912	8,835	61,845

The decline in thirty years has been 57,042 barrels to 8,835 or about one-seventh of the quantity and to almost one-third of the value. Successive provincial administrations had grappled with the subject with a view to prreventing the inevitable extinction of the oyster. Jurisdiction ove[r]

the inland waters of the province had been, according to an interpretation of the British North American Act, somewhat vaguely divided between the federal and provincial governments and any satisfactory solution of the problem seemed impossible. It was not till 1911 that any definite steps were taken. The present premier, Hon. John A. Mathieson, immediately on assuming the government of the province, took up the question with the federal government and succeeded in concluding a mutually satisfactory agreement by which the provincial government was given the management of the oyster areas, Under this arrangement steps were at once taken to convert the barren and depleted areas into cultivable oyster farms. Richmond Bay, by far the wealthiest oyster section in the province was surveyed and laid off into measured areas. Of the 30,000 acres in the Bay, 14,000 were reserved for public fishing and the balance offered to lessees at a rental of $1 to $5 per year per acre. Of this latter quantity 5,000 acres have already been leased in blocks of various sizes to eight companies formed during the past year with a total capitalization of $518,000. Other companies are also in process of formation and, no doubt, within another year or two, the remainder will have been taken up. Already the companies have done considerable development work, one of them having planted as many as 1,000 barrels of seed oysters.

There are other oyster areas in the province which are also being surveyed for leasing and it may fairly be assumed that the extinction of the famous Prince Edward Island oysters has not only been indefinitely postponed, but that as a result of the efforts being now put forth, a foundation has been laid for a very much larger harvest for years to come.

Codfishing, the annual value of which is something under $100,000 has been conducted in a somewhat haphazard manner, the fishermen for the most part being their own curers, often inexperienced and not always bringing the quality of their catch up to the standard required by the markets. What the lobster canning factories under expert management have done for the lobster business a few properly conducted cod-curing plants in favorable localities along the coast would undoubtedly do for the cod. It is a valuable fish, always in demand and at paying prices. Developed as it might be the annual returns could be easily quadrupled, as, with the assured market that regularly conducted curing plants would afford, many more fishermen would engage in the business.

The whole fishing business of the province is at present seriously handicapped by transportation difficulties. There is practically no export of fresh fish, the rehandling made necessary by the transfer from train to steamer on the Island side and from steamer to train on the Mainland with the consequent delays incurred, making this method of marketing both uncertain and expensive.

The car ferry, now under construction will remove this difficulty by making the Prince Edward Island Railway continuous with the railway system of the continent. With a continuous rail haul, a car load of fish can be shipped direct from any point on the P. E. I. R., without breaking bulk, clear across the continent, or to any railway point in the United States. This will enable fish dealers to ship in larger quantities, to choose their time of shipment to suit the requirements of the market and so secure the best possible price. The completion of the car ferry is expected to revolutionize the fish business of the province.

SHELBURNE, N. S.

(From our special correspondent.)

The Joseph McGill shipyard was kept fully occupied during the past year. The following vessels were completed during 1913:—

Chesley Raymond, 108 tons, owned by S. Harris, Grand Bank, Newfoundland.

Ornate, 98 tons, owned by Jos. Conrad, Lahave,

Ohio, 46 tons, owned by Roseway Fish Co., Shelburne, N. S.

Ella C. Hollett, 97 tons, owned by Hollett Bros. Burin, Newfoundland.

Susan E. Inkpen, 113 tons, owned by Ephraim Inkpen, Burin, Newfoundland.

All the above fishing schooners, of thoroughly up-to-date lines and equipment. Another schooner of about 105 tons is nearly completed, and will be launched early in January. She is for Thomas Shave, Burin, Nfld. Other orders have already been booked for 1914, and the coming season promises to be a busy one.

The founder of the business, Mr. Joseph McGill, died last August, and the industry is being carried on, along the same lines, under the management, of Alfred D. Bruce, who has been connected with the firm for the past 24 years. The establishment is the most complete of its kind in the Maritime Provinces. Its steam plant comprises practically every kind of machinery used in building wooden vessels, and it has its own forge, galvanizing plant, etc., and imports Oregon Pine spars and booms direct from the Pacific coast.

YARMOUTH, N.S.

(From our Special Correspondent.)

Never in the history of the town and county of Yarmouth, has there been such a complete and unexpected change in any particular industry as 1913 has seen in the greatest of our natural resources, the fisheries. Years ago, Yarmouth did an immense fish business, but then it also did a large foreign business. Its vessels were known in every port in the world. There was a particularly large West India fleet and it took an immense quantity of fish to supply their trade. As the shipping business gradually died out so did the fishing industry. And of late years the few fishermen fishing in open boats for the local market, would find that market glutted if two or three boats happened to strike it at the same time. The export returns have always shown Yarmouth favorably, but it was only parading in borrowed plumage. As the terminus of an aggressive steamship line between Nova Scotia and the United States, and as the nearest port to one of the greatest fish markets in the world, Boston, a large quantity of fish was received here every boat day—daily in summer, semi-weekly in winter—from the whole western and southern parts of Nova Scotia. These always figured as "Yarmouth exports," but the real exports were but a small percentage of them. Attempts have been made from time to time to revive the fishing industry, but no one ever grew rich off them. For some years past the few vessels fishing out of

Digby have used Yarmouth through the winter as a base from which to work. Sometimes a fare would be sold here, and again, through stress of weather, a vessel would be compelled to trans-ship her catch to her home port. Not much interest was taken by the general public in the work of these vessels and their "comings and goings," often passed unnoticed in the local press.

But how things have changed during 1913! The proposed changes in the American tariff had been talked of all the year. It was felt that if they were adopted that Yarmouth would be sure to benefit by them. Why not? Yarmouth county supplied a large proportion of the men of the Gloucester and T. Wharf (Boston) fleets, and no better fishermen can be found anywhere. With the American market thrown open to them why couldn't they fish at home instead of going across?

Then the change came into effect. The Underwood tariff was adopted and at once things commenced to look up, and as usual the first to avail themselves of the new conditions were the Americans themselves. A syndicate representing ten of the wealthiest fish concerns in Boston, formed the Consumers' Fish and Cold Storage Company, with a nominal capital of $50,000, but in reality with enormous capital behind them, and had leased a wharf and actually started buying before the Yarmouth people realized that "something was doing!" A local company, the Gateway Fish Company, was in process of organization at the same time, but did not move so swiftly as did the Consumers. In fact, at this writing they have not got under way. Their manager, a Boston gentleman of experience is under contract with another concern, and can not as yet take up his work with the Gateway people. They have done better than the Consumers in one way, though. Where the latter only **leased** wharf property for a term of three years, the local concern has **purchased** one of the best wharf properties for the fish business in the Maritime Provinces. The wharf was built years ago expressly for the business, and since the firm that built it went out of business, other fish men have leased it and added improvements from time to time. It was fearfully run down when the Gateway Company acquired it, but it can and will be put in thorough condition before actual business is commenced.

During the past two months the water front has taken on a livelier aspect. There have been times in the past when the only life on the water front was on Cann's towboat wharf and the Boston and Yarmouth steamship wharf—at the latter, only on "boat days." Another wharf, busy part of the time was that of the Yarmouth Trading Company, at the south end of the town—a company which does a big business in dry fish. Now, with quite a fleet of vessels coming in every day or so to dispose of their fares, there is something doing almost all the time. These vessels have to find wharfage and as each one carries a crew varying from eighteen to twenty-six men, it gives an aspect of life to the wharves which they have not had for some time.

But it is not in direct returns that Yarmouth measures the benefits derived from this source. Dollars and cents are mighty useful articles, and the amount of money circulated here by the fishermen is not to be despised, but Yarmouth stands to gain more by the spirit of optimism which has taken possession of its citizens during the past two months, than by the purely financial end of the business. A few short weeks ago the majority of Yarmouthians were "knockers;" nothing was going right and everything was blue and getting bluer. But now—there is no place in the province like Yarmouth; see how close we are to the fish grounds. Why fish can be caught from ten to twenty miles off here (and strange to say this has seemingly just been discovered), and they can be put on the boat and sent to Boston while still "kicking." Nobody is knocking now, except a few who would do so if they were pelted with gold dollars; everybody is boosting and the future looks bright. But the business men have come to the conclusion that it is not in manufacturing that the future of the town depends; they have awakened to the fact that it is from the sea, right at their doors, that the harvest of the future will be reaped. Fishing has been looked down upon too much in the past; it has now got to be placed upon a pedestal, and made the principal object of our business worship.

"1914" looks encouraging to Yarmouth. With a fresh fish business on a fairly large scale, already established, and with every facility at hand save a cold storage and artificial ice plant (which is now being agitated), to prosecute it, we expect to see such a revival of the fishing business here, as will make Yarmouth as important a fish port as Gloucester is now.

A resume of the exports for 1913 shows that we have done a fairly large business all through the year. It is interesting to compare the items with those of years ago. Fish products once despised and neglected now form important shipments. Such for instance as tuna (locally called horse mackerel or albacore), swordfish, periwinkles, etc. A few years ago, the horse mackerel captured were made into compost; swordfish and periwinkles were not touched.

The principal item of export is lobsters and in these it is said that Yarmouth does the largest export trade in live lobsters in the world. During the months of January, February, March, April and May (the open season), the immense total of 4,863,100 pounds, valued at $297,472 were shipped.

Other important exports for the ten months ending October 31st (the latest for which figures are available) were as follows:

	Value
Cod	$81,802
Haddock	15,907
Smelts	2,310
Halibut	8,663
Hake and cusk	1,500
Shad	498
Pollock	$9,190
Mackerel	81,682
Herring	35,024
Albacore	1,264
Swordfish	385
Clams	3,045
Periwinkles	50

It is gratifying to know that during the year just closed there has been no loss of life among the fishermen of Yarmouth. One schooner, the Veritas, was lost by running ashore on the Bay if Fundy coast. Several American vessels, have been damaged in this locality, the schooners Morning Star, Imperator, Premier and Squanto. The first three ran ashore and the last named was dis-

masted. The three were successfully floated and brought to Yarmouth. The Morning Star was sold to a local syndicate, but has not changed her register. The Imperator was repaired and resumed her voyage, and the Premier is still under repairs. This last vessel was doubly unfortunate as she fell off the Marine Railway at Yarmouth, when hauled out for repairs.

The month of December has been a busy one in the fishing industry in Yarmouth. The unseasonably mild weather and the entire lack of ice were drawbacks at first, and the dealers could not handle all the fish that offered on that account. Then, too, fishing has been interfered with to some extent by high winds but not nearly so much as during some Decembers in the past. The fleet now fishing out of this port consists of the following schooners: Dorothy G. Snow, Captain Ansel Snow; Loran B. Snow, Captain Casey; Dorothy M. Smart, Captain William Snow; Myrtle L., Captain Longmire; Angie B. Watson(Am.), Captain Skolfield; Marion E. Turner (Am.), Captain Turner; Ruth (Am.), Captain Devine; Mertis H. Perry (Am.), Captain Simms; Pontiac (Am.), Captain Parsons; Jessie Costa (Am.), Captain Blackford; Morning Star (Am.), Captain Ross.

Schooner "Premier" After Falling off the Marine Railway at Yarmouth, N.S.

Under our Canadian laws it is only the British vessels which can sell outright to the local dealers. The American vessels, however, land their fish, pack it and ship to Boston. In consequence the fares brought in by the Amercian vessels provide a lot of work for local men in the handling and shipping—in fact they probably put almost as much money in circulation as do the vesesls which have the full privileges of the port.

A cargo of artificial ice from Portland, Maine, which arrived about the tenth of the month, relieved the ice famine, at least temporarily, thus enabling the fish men to handle more fish than they had been able to. Yarmouth was probably the only port on the shore which had ice, and this, combined with the fact that the Yarmouth buyers were paying as high as four cents for haddock, brought the fish here in fair quantities. This price was unprecedented, and as it was paid in cash as soon as the fares were checked off, it created an entirely new departure in the fish business.

From the 25th of November up to the 19th of this month the following fares had been brought to this port:

		Pounds
Nov. 25	Jessie Costa (Am.)	20,000
" 25	Squanto (Am.)	3,000
" 26	Gladys Thorburn	2,000
" 28	Lydia May	8,000
" 29	Albert J. Lutz	14,000
" 29	Myrtle L	6,000
" 29	Gladys Thorburn	3,000
" 29	Ella M. Rudolph	3,000
Dec. 4	Angie B. Watson (Am.)	14,000
" 4	Marion E. Turner (Am.)	12,000
" 4	Loran B. Snow	10,000
" 4	Ruth (Am.)	15,000
" 6	Marion E. Turner (Am.)	14,000
" 11	Dorothy G. Snow	10,000
" 11	Loran B. Snow	18,000
" 11	Dorothy M. Smart	15,000
" 14	Loran B. Snow	15,000
" 14	Dorothy G. Snow	20,000
" 14	Myrtle L	10,000
" 14	Morning Star (Am.)	12,000
" 14	Ruth (Am.)	5,000
" 14	Pontiac (Am.)	9,000
" 16	Loran B. Snow	27,000
" 16	Myrtle L	11,000
" 16	Dorothy G. Snow	12,000
" 16	Mertis H. Perry (Am.)	7,000
" 16	Morning Star (Am.)	20,000
" 16	Ruth (Am.)	5,000
" 16	Angie B. Watson (Am.)	17,000
" 18	Morning Star (Am.)	3,000
" 18	Ruth (Am.)	10,000
" 18	Pontiac (Am.)	40,000
" 18	Dorothy G. Snow	10,000

Not all the above fares were landed here. A few were taken away to Digby or left aboard the vessels and taken to Boston as in the case of the Squanto.

During the same length of time the principal fish exports were: 424 bbls. pickled fish, 984 bbls. salt herring, 829 bbls. salt mackerel, 4727 boxes boneless fish, 4788 drums dry salt fish, 31 boxes bloaters, 45 bbls. fish waste, 673 cases fresh fish, 5 cases fresh halibut, 153 boxes smelts, 20 bbls. fish oil 19 bbls. fresh mackerel, 298 bbls. clams, 57 bbls. eels, 195 crates live lobsters, 154 boxes Finnan Haddies, 59 bags hake sounds, 427 cases canned lobster.

On the 17th of the month a new record was made for this port when a single shipment of 339 cases of fresh fish (169,500 pounds in all) went forward on the steamer Boston to Boston.

The 15th inst. saw the opening of the lobster season. In the past there have been many violations of the law; pots have been set days before the legal time arrived, lobsters have been concelaed—and it took a pretty smart Government cruiser to find them. This year there have been no wholesale violations. The fishermen themselves are watching each other now to a great extent. In consequence of this the first shipment consisted of but 195 crates, compared with anywhere from 600 to 1,000 in former years. They fetched a fairly good price, selling in Boston at $24 per hundred pounds.

A local dealer J. F. Ehrgott whose specialty is dry and cured fish, having purchased all the available herring from nearby points for his New York trade, made a purchase of 3,500 boxes of smoked herring in St. Andrews' at an advance of 20 cents

a box over what the St. Andrews' people got for them last year. They also went to New York.

The locally owned handliners have hauled up for the winter, and the fishermen who generally prosecute that industry are now enagged in lobstering.

The Board of Trade and Town Council are cooperating in an effort to secure a cold storage and artificial ice plant here. It is an absolute necessity. if the town is going to derive all the benefits from the fish business. The vessels must have bait and ice and if they can get it right here where they dispose of their fares, they will gain a lot of time and manage to make many more "sets" in the run of a year.

VALUE IN DOGFISH.

The dog fish has at last been found to be of some use. According to the report of the Commissioners on Fisheries and Game, just issued the dogfish may prove to be one of the most valuable fishes in the sea. Well known scientists believe that dogfish will come into general use as a food, besides being of value for oil, fertilizer, tanning fluid and gelatin. The investigators also find that the entrails, eggs and skins are worth money when properly handled.

The report states that in the experiments at East Boothbay, Me., and at Provincetown, Mass., success was not attained because the material was not completely utilized and too high a price was paid the fishermen, the East Boothbay plant paying $1 per 100. The eggs were not separated for specific use; the preparation of highgrade oil from fresh caught fish was not attempted; the fins and entrails were not cured; no efforts were made to utilize the skins, or to convert the flesh into "fish meal" for poultry or stock feed.

On the other hand, the investigation found that plants of a similar nature in the Provinces were successful. The fertilizer obtained from reduction of dogfish is of special importance, as it contains a large quantity of nitrogen, the most costly of chemical food plants, the report states.

Other investigators find that the skin can be used as high grade polishing paper, swordhilts, knife handles and purses. Professor Keith of Technology finds that the dogfish eggs, containing less water and fat and more protein than a hens egg, resemble cooked halibut in taste and have a high food value. Eggs are worth 3 to 5 cents a pound as tanning material.

The fins and tails, slack salted and dried, are special delicacies of the Chinese and the report states that there is a favorable market now developing in this country. The dried tails and fins retail at 25 cents a pound. The scientists figured out that the total value of an average adult dogfish is almost 6 1-5 cents, while the female dogfish is worth nearly 2 cents. Reckoned by the ton, dogfish should be worth from $14 to $16, the report says.—(Exchange.)

Driving for Market in Windy Weather.

INSPECTION OF CANNED FISH.

A despatch from Ottawa states that the Department of Marine and Fisheries is drafting an act which will provide for rigid government inspection of cured fish, from the standpoint of pure food.

The new measure, certain details of which have yet to be worked out, is largely based upon an act which has been in force in Scotland for several years past, with excellent results. It will likely go into effect in time for next season's catch, and will undoubtedly go a long way not only towards stimulating Canadian fishermen and packers to better efforts, thus enhancing the prestige of Canadian fish abroad, but also towards giving the consumer purer, more healthful and better fish.

THE PACIFIC FISHERIES

CENTRAL WHOLESALE FISH MARKET FOR VANCOUVER, B.C.

There seems to be in the minds of all interested in the Fishing Industry of Canada, that the new tariff now in operation in the United States, has given the industry a new impetus, both on the Atlantic and also on the Pacific coasts. The new markets opened up and wider distributing facilities have brought to light several points that have been in the minds of those that have the furtherance of the industry at heart. Amongst the questions arising, is that of thorough inspection, and consequently Canadian Fish known to the world's markets as being caught, packed and shipped under the latest and most sanitary conditions.

This fair name Canada enjoys to a considerable extent already, and it is the wish of all to have the name an indisputable one. It therefore behooves us, seeing that we enjoy these new markets, to endeavor to show our appreciation by giving only the best to be obtained.

Vancouver is the largest city in the Dominion in direct touch with the ocean as far as fishing is concerned. Her fish is brought in the vessels that it is caught in, direct to her wharves. For this reason, and owing to it that all her fish is congregated to a certain extent, at one point before being marketed, the idea of a central market has now arisen.

This leads to the question of thorough inspection. The members of the Health Committee of the city of Vancouver, have now under consideration the idea of a Central Wholesale Fish Market for that city. Unless the writer is astray in his information, we in Canada have nothing to approach or equal either the famous T Wharf of Boston, Mass., nor the equally well known Fulton Market of New York. It is not the ambition of Vancouver to attempt any such large undertaking as these two; but, through the efforts of her capable health officer, Dr. F. T. Underhill, she wants her citizens to have their fish foods of the very best. In other words she wants to have nothing but the freshest, and cleanest of fish, and to have it reach the consumer under the best possible condition and as free as is possible from any likelihood of contamination.

To this end, Dr. Underhill is striving for a Central Wholesale Fish Market. So far the wholesale fish markets of Vancouver are separated from each other, but still grouped within a certain area. But not by any means do these markets get the whole of the city trade. They have their regular clients amongst the retail stores, hotels, resturants, and interior British Columbia points; but a certain amount of the fish that eventually reaches the public of Vancouver is comprised of fish that these markets will not take.

Whilst we do not say that all the fish sold outside of the markets is unfit for sale, still owners of the cheaper retail stores, especially from the Oriental quarters of the city, house-to-house hawkers, and proprietors of the cheaper restaurants visit the slips where fish is landed, and there make their purchases. They buy fish that otherwise would be destroyed, at the best bargain they can drive. Then, in many cases, by the time this fish reaches the consumer all signs of perhaps deterioration, have been covered up, either by cutting the fish into slices or else by "doctoring" known to the vendors. Further, many boats have tanks where fish is kept alive for days on end perhaps, a treatment that can not but cause deterioration to the fish so confined.

To avoid these conditions, and to ensure the public of Vancouver being supplied with wholesome and healthy fish only, the proposal is to erect a Central Wholesale Fish Market. This building is to be as far as possible away from any sewer outlet, and at the same time as near as practicable to the slips where the boats land their catches. In this building fish can only be sold that has been passed by a fully qualified inspector. The building is to be under the jurisdiction of and owned by the City of Vancouver, and in it will be housed the various wholesale fish markets.

Each morning it is proposed to have an inspector on hand, who is fully cognisant of his duties. All fish landed and all fish to be offered for sale has to go through his hands. Only fish that has passed him is to be offered for sale, and as far as possible all fish that he will not accept is to be destroyed.

That this is a move in the right direction can not be doubted. Practically without exception, all the Vancouver wholesale fish markets have endorsed the proposal, and ask for thorough inspection. In reply to the following questions submitted to them, they report in the manner herewith stated.

1. Are you in favor of a Central Fish Market and no vending of Fish being allowed at any other point within the harbor limits of the city?
   Ans.—Yes.
2. Do you think that an improvement in general conditions in respect to sanitation and ease of accessibility of supply would encourage a larger consumption of fish?
   Ans.—Yes, greatly so.
3. Would you recommend the appointment of a special Fish Inspector for such Central Fish Market?
   Ans.—Yes, a practical fish-man.

4. How long should fish be allowed to remain on board boats after arrival in port?
   Ans.—At the most 24 hours.
5. Should fish, especially cod, be brought to the wharves alive?
   Ans.—All right if killed on arrival, but better to kill on the fishing grounds.
6. Should occupiers of wholesale fish markets or stalls be licensed?
   Ans.—Yes.
7. Should Fish Hawkers be licensed?
   Ans.—Yes.

From the above will be seen that the idea proposed by Dr. Underhill, is in sympathy with those most interested.

Furthermore, the old rooted idea in the minds of many good people that "fish is dirty," will by these means be removed. Sales are bound to increase, and the cheapness of fish alone ought to be a factor in the reduction of that bug-bear of philanthropists—the high cost of living. Once the public is shown that the fish foods offered to them are all clean, fresh and free from germs, many householders will have fish more frequently on their tables.

This idea of inspection is one that would further the plan that the Department of Marine and Fisheries at Ottawa had in mind when it put on the Exhibition of Fish Foods in Toronto at the August-September Exhibition in that city. The comment by the public was most favorable, and inspection would only serve to further this campaign.

Naturally it is a practical impossibility that the large companies who bring in fish in vessels for freezing and salting purposes, be classed under the same category as the dealers handling for local consumption. But the policy of the CANADIAN FISHERMAN would here show its good work. We believe that it is the policy of this paper to propagate the gospel of good clean fish; to eliminate as far as possible, the too frequent "forking" of and trampling on fish that has always obtained amongst fishermen the world over. This policy is one to be endorsed by the whole trade as it is a direct advance in the direction of better sanitation.

The proposal of Vancouver to have a Central Fish Market is one that will trend towards the long desired inspection of fish by the government under whose jurisdiction the shipper may be. It may mean a slight additional cost to the packer, but the public will gladly pay this knowing that it is getting only of the best. Our foreign buyers will also appreciate this inspection, just as much as the citizens of Vancouver will or of any other city for that matter. It will be to their benefit and only tend to increased purchases.

PACIFIC FISHERIES TO BE SURVEYED.

Official information has been received by Chief Inspector Cunningham of the Dominion Fisheries here, that in accordance with the recommendation of the Pacific Division of the Fisheries Advisory Board, a survey of the fishing resources of the Pacific Coast has been arranged to begin next summer. Two experts, one from Scotland and one from Norway have been engaged to carry on the work under the supervision of the Biological Board of Canada.

The necessity for such a survey was strongly urged upon the Minister by Chief Inspector Cunningham on the occasion of the former's visit to the coast last summer and the sanction he has given to this action is a result of the representations then made to him.

TO INVESTIGATE HALIBUT HABITS.

Detailed information has been received at the Dominion Fisheries office, regarding the fisheries survey of this coast that the Minister, the Hon. J. D. Haxen, has promised for next summer. The investigation will be thorough and detailed, following the lines recommended by Mr. Cunningham and Mr. D. N. McIntyre, the deputy commissioner of fisheries for the provincial government, on the occasion of the Minister's visit to the coast last summer.

Perhaps chief among the points to be investigated is the question of the location and areas of the spawning grounds of the halibut. In fact the halibut will form the chief subject of investigation. The spawning period, the resorts of the young halibut, or halibut "nurseries," will also be investigated, while the inshore migration of large halibut will be a subject of the feeding areas and the nature of the food, while the methods of capture and the handling of the halibut will also receive attention. The study of the halibut scale in connection with its life history will be continued.

ALASKA FISHERMEN TRY THE CO-OPERATIVE SYSTEM.

Up in the fishing town of Wrangell in Alaska, there is a company of fishermen banded together for mutual advantage, known as the Alaska Co-operative Fishing and Packing Association.

Membership is limited to actual fishermen who own their own boats and equipment. The association is capitalized at $100,000 and has already fifty members. Many of the members are residents of Wrangell, but the other centres such as Juneau, Hoonahan are now supplying their quota.

Up to the present the Association has confined itself to handling the mild cured fish, especially salmon, and to this end they have already erected a cold storage with capacity of 200 tierces or eight cars. Now that the Association has felt its way and worked out the idea that it started with, it is now proposed to enter into all the branches of the fishing industry. In future it is proposed to handle frozen halibut and salmon, and possibly herring, which is so plentiful, will also be handled.

The Association now proposes to purchase or build a large boat to act as a collector. This boat will visit the different fishing stations and thus consolidate the catches at the head plant. From there shipment will be made to the Puget Sound ports.

The officers of the Association are as follows: President, Fred Bevier; Secretary and Manager, J. H. McGeehee. Directors: Pat Heines of Ketchikan, Albert Peterson of Juneau, N. S. Harvey, George Card and G. E. Britton of Wrangell.

PACIFIC HALIBUT IN ENGLAND.

A shipment of Canadian Pacific halibut from Vancouver was recently landed at Liverpool ex the steamer "Dominion," and sold in the Grimsby market. The shipment, amounting to a carload, was kept in cold storage from the time it left the Coast, and on arrival, was found to be in excellent marketable condition.

Mr. Thomas Robinson, a well-known trawler owner of Grimsby, was the originator of the idea of importing British Columbia halibut to offset the scarcity of halibut in British waters, and with prices up as high as 24 cents a pound, there is no doubt that a good business can be built up with the importation of the Pacific fish.

NEW FISHERY PROTECTION CRUISERS.
S.S. "Malaspina" and "Galliano."

The first of these two new up-to-date little vessels has now arrived and is fully up to all that was expected of her. The particulars are as follows:

New Fishery Cruiser "Malaspina."

Steel construction; displacement 700 tons, length 160 feet, beam 26 feet 6 inches, draught 12 feet 6 inches, armament, one 6 pdr. Q.F. Deck officers 3, Engine officers 3, deck hands 19, Engine room 8, H.P. 1,500, speed 14½ knots (has done 15 on trials), coal capacity 200 tons, screw propellers 1, electric lighted, wireless telegraph apparatus.

Both vessels were built by the Dublin Dockyard, Ltd. The sister ship "Galliano" is expected out in February.

These smart little vessels will cruise the coast and take on the work of inspecting licenses, watching foreign fishermen to see that they keep outside of the limit and other work connected with the department under which they work.

EFFECT OF UNDERWOOD TARIFF IN WESTERN CANADA.

So far it seems that British Columbia is taking advantage of the new United States tariff, just as her sister provinces on the Atlantic and Newfoundland have done. This season just ended has seen a lot of Salmon going into Seattle and Tacoma, especially of the Cohoe and Qualla species. So far canned salmon has not been affected much, as with the advantages of trap nets enjoyed by our cousins across the line, the operating expenses of this industry are consequently lessened, and prices on the finished goods in proportion.

Fresh herring, bass, perch and other fish plentiful in the British Columbia waters are being eagerly taken up by the Sound cities, and the wholesale fish dealers of Vancouver fo not seem to have any cause for complaint regarding lack of trade.

To round off these benefits enjoyed by the Canadian fisherman, to many minds it seems only right that Canada should reciprocate, and allow her fishermen to obtain supplies that they happen to be short of, duty free. But as this matter touches on political issues, it is just as well to merely mention it in passing.

The effects of the Underwood Tariff are being felt also in the West through the fact that Eastern Canadian shippers apparently have now all the trade that they can attend to, and so deliveries can not be obtained as quickly as in former years.

Owing to the fact that the British Columbia famous "Sockeye" run occurs once in four years, whether or no there will be a change in government in the United States by the time the "big year" is with us again, is a matter in the laps of the gods. We can only conjecture on the matter in the same way that we can only theorize as to why there should be "big years" with the Sockeyes.

VANCOUVER FISH MARKET.
GENERAL NOTES.

The total pack of canned Salmon reported for British Columbia for 1913, is as follows:

Total number packed		1,363,901
Distribution:		
Fraser River	732,059	
Skeena River	164,055	
Rivers Inlet	68,096	
Naas River	53,423	
Outlying	246,268	1,363,901
Classification:		
Sockeyes	982,187	
Red Springs	37,433	
White Springs	3,616	
Chums	77,956	
Pinks	192,887	
Cohoes	69,822	1,363,901

1913 was a "fourth year" in the Salmon business. During the run, the amount of fish offering kept all packers working at full pressure, and on several occasions had more offering than they could manage.

Even against the previous "big year" 1913 is ahead to the number of 164,856 cases. Taking 1912 and 1913 the totals are as follows:

	1912	1913
Fraser River	173,921	732,059
Skeena River	254,258	164,055
Naas River	137,697	53,423
Rivers Inlet	71,162	68,096
Outlying	359,638	246,268

These differences in the Northern rivers are accounted for by the fact that the Sockeye did not reach these rivers this year. A great bulk of the Sockeye packed in the Northern canneries was

freighted from the Fraser to ease off the congestion on that river.

There seems to be a greater demand in the Orient for the British Columbia dry salted herring this year. The S.S. "Monteagle" sailed on the 11th of December, with no less than 1727 tons and previous several thousand tons were already shipped. This herring is shipped at an approximate f.o.b. price of $22 per ton of 2,100 lbs., and consequently the only way to make any money is to pack in very large quantities. This business offers considerable chances for speculation, but like all these games everybody does not come out ahead.

The British Columbia Fisheries, Limited, which went into the hands of a receiver the past fall, is reported to be raising additional capital, and to start anew the coming season. This seems to be about all that it could do, else otherwise all the money spent on plants, etc., would be lost altogether.

Business conditions on the whole have been quiet except for fish. Those interested in that industry on the Pacific coast have no complaints to make, but seem to be doing good business. Now that the winter months are on us, there will be even less cause for complaint.

Prices British Columbia Canned Salmon.

Sockeye, Talls	per case	$6.25
Sockeyes, Flats	per case	6.75
Sockeyes, Flats, halves	per case	8.25
Cohoes, Talls	per case	4.25
Cohoes, halves	per case	6.50
Pinks, Talls	per case	2.75
Pinks, halves	per case	4.00

Market stiff with upward tendency on account of short stocks.

VANCOUVER FISH MARKET.

Ruling Wholesale Prices.

Fresh Fish:

Salmon, dressed heads off	per lb.	$ .00
White Salmon, do	per lb.	.00
Halibut	per lb.	.09
Cod	per lb.	.06
Smelts	per lb.	.06
Herring	per lb.	.03
Soles	per lb.	.05
Flounders	per lb.	.03
Whiting	per lb.	.05
Oolachans	per lb.	.06
Skate	per lb.	.03
Perch	per lb.	.06
Rock Cod	per lb.	.06
Red Cod	per lb.	.04
Sea Bass	per lb.	.06
Black Cod	per lb.	.08
Cod Roes	per lb.	.00
Shad	per lb.	.00

Frozen Fish:

Salmon Red Spring dressed heads off	lb.	$.00	whole lb.	$ .00
Salmon White Spring dressed heads off	lb.	.00	whole lb.	.00
Salmon Sockeye, do	lb.	.00	whole lb.	.00
Salmon, Cohoes, do	lb.	.06	whole lb.	.05
Salmon Humps, do	lb.	.00	whole lb.	.00
Salmon Qualla, do	lb.	.04½	whole lb.	.00
Salmon, Steelheads, do	lb.	.09	whole lb.	.08

Cod	per lb.	$ .06½
Halibut	per lb.	.06½
Smelts	per lb.	.05
Oolachans	per lb.	.05
Soles	per lb.	.05
Flounders	per lb.	.03
Perch	per lb.	.06
Herrings	per lb.	.03
Whitefish	per lb.	.00
Black Cod	per lb.	.08
Shad roes	per lb.	.25

Smoked Fish:

Salmon	per lb.	$ .12
Halibut	per lb.	.12
Cod	per lb.	.08
Finnan Haddie	per lb.	.09
Kippers	per lb.	.07
Bloaters	per lb.	.07
Kippered Salmon	per lb.	.12
Kippered Halibut	per lb	.00

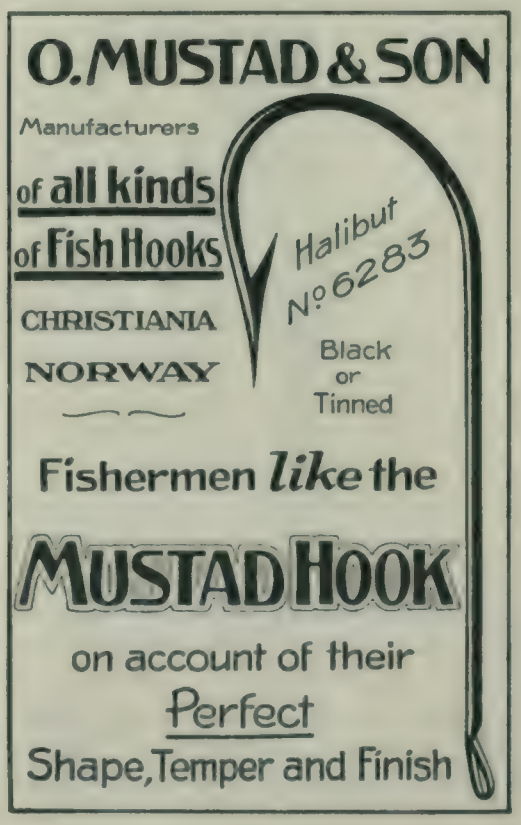
Salted Fish:

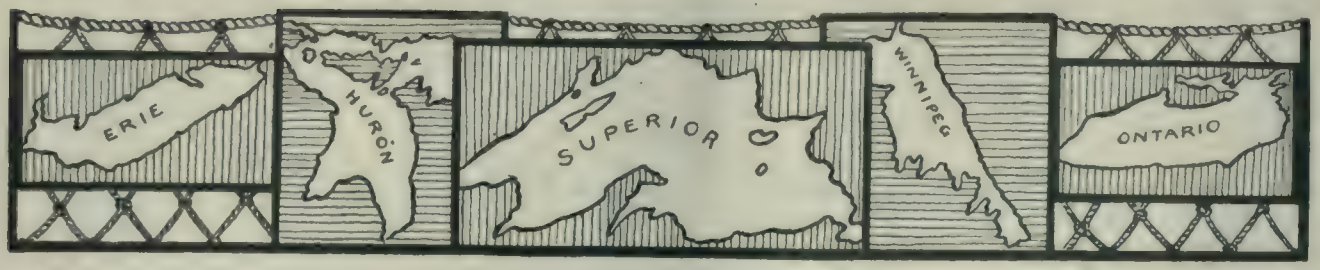
Salmon White Spring	per lb.	$ .00
Salmon, Red Spring	per lb.	.00
Salmon, Sockeye	per lb.	.00
Salmon, Humps	per lb.	.00
Salmon, Bellies	per lb.	.09
Black Cod	per lb.	.09
Herring	per lb.	.05

Shell Fish:

Crabs (deep sea)	per doz.	$1.00
Shrimps	per lb.	.15
Clams	per lb.	.03
Olympia Oysters	per gal.	3.25

(Reported by London Fish Market Company.)





THE LAKE FISHERIES

GREAT LAKES FISHING

Unmitigated hard work is the stern reality of lake fishing and the average stipend is not princely. The earnings range from a hundred dollars by the man who is a farmer, carpenter or rustabout and turns fisherman when the rush is on, to the man with the thousand dollars worth of boats, nets, sheds, etc. and brings ashore $15,000 worth of fish. Both have their relative expenses to pay and it is a bold guess to predict their net earnings beforehand.

The Great Lakes fishing is pretty evenly divided in importance between trout, whitefish and herrings.

Practically each year has seen a decline in the production of trout, and while there has been a big increase in the price paid the fishermen, between the advanced cost of commodities and the competition of cheaper sea fish, the producer is probably worse off. The increase in the consumption of sea fish, due to their relatively low original cost when produced in large quantities and carload lot transportation, has tended to put a minimum price on lake fish. It is a case of how much, in dollars and cents, does the consumer prefer lake fish. The consequence is that although the catch decreases, the price per pound does not advance to make the same gross revenue.

Trout were abnormally scarce during the season past. In fact the government decided to extend the season in order to procure enough spawn for the hatcheries. This information was wired to their inspectors and interested the parties, but was countermanded a half hour later. Last lifts had brought enough spawn ashore. The records of the catch are not yet completed. The indications are that frozen Trout in the freezers is probably not half of the quantity of a year ago. Prices are ruling much firmer. In 1912, considerable trout was frozen from the Spring run and an extension of ten days was granted in the Fall. This season there was practically no surplus in the Spring and freezing operations did not commence until within 15 days of the close of the season.

Whitefish production has been somewhat below the ordinary. Even with an extra good catch, Great Lakes whitefish are largely sought by the trade, and no difficulty is experienced, except for a couple of weeks during the heavy run in disposing of the stock fresh caught. Were it not for the whitefish produced in the North Western Lakes, whitefish would be a rare dish on the average table as practically none of the Eastern whitefish is frozen and placed in storage for Winter use.

Lake Erie fisherman have done well this year, extra well. Producing what is without question, the finest herring and whitefish it is a marvel that with the colossal quantities of fish taken each year that it is not depleted. Probably the greatest preventive is the re-stocking being carried on. The U. S. Government has taken 13,000 quarts or 450 million whitefish eggs alone for their hatcheries.

Some tugs, hardly the exception either have produced up to $18,000, worth of fish. Even with the big tugs and high expenses this leaves a tidy sum to contemplate through the Winter months. Moreover, a number of the fishermen formed a Co-operative scheme, marketing all their products through one broker and holding for a set price. Their experiment is being watched by the fish trade in general but the actual results will not be known until the enormous quantities of frozen herring in storage have been sold. In some quarters their action is being questioned, so much so, in fact, that a member of the provincial Government in a public announcement seeemed to aim a direct shaft at their methods. In one instance at least, the ring sought an injunction to prevent a former member from selling independently without their consent.

The market for fish was never better. For years meat prices have advanced until the consumer is now making mental calculation with a view of getting a substitute. With this end in view the big wholesale firms have based their selling campaigns on education of the consumer. They have shown the advantages of fish as a basic food, the comparative prices of meat and fish and the waste to be considered when the consumer purchases. As a result the consumption of fish has increased per capita as well as the natural increase with the population. In addition to this, their activities have resulted in establishing a market for the cheaper and coarser lines, which has been materially assisted by the big increase of foreign population.

The method of preparing, cooking and handling fish has received special attention and the continued campaign to instil into the retailers the fact that it is a food they are handling, and not hardware as some of their actions would seem to indicate, has had a notably beneficial effect.

The new U. S. tariff which cancels the duty on fish entering the States should be an immediate benefit to the Canadian fishermen. The counter balance would appear to be the Canadian Public's loss. Let us suppose that a fisherman is now paid 10c. a pound for his catch and the previous tariff entering the States was 1c. per pound. The intermediate steps consumed 5c. a pound and the fish reached the consumer at 15c. per pouud. With the duty removed, the American Wholesale Jobber

could increase his price to the fisherman a half cent and still sell the consumer a half cent less than previously. Naturally the Canadian Jobber must meet the new price and the intermediate steps being the same, the Canadian consumer ultimately pays the bill. Where a prevailing duty has been removed, no matter what sets of figures are used the result is similar. It will be interesting to note the results in next year's business.

Fishermen can look forward with confidence to the future. Markets are widening in the use of fish in the same ratio as our other natural resources and that proportion has been large. We can see a time that absolutely no product of our waters will go the way of waste as in the past. Food is now too much at a premium to allow this. Markets are widening for the production and the Government is taking the most intelligent and advanced stand to prevent depletion of the waters. In one case at least, they have spent thousands of dollars in clearing a small lake in Ontario of non-edible fish. Altogether there is a very hopeful outlook for the fisherman, the trade, and the consumer.

WHITE FISH SUPPLY TO BE REPLENISHED.

A report issued from the United States Bureau of Fisheries shows that already this season it has taken 450,000,000 white fish eggs to Lake Erie. This is 13,000 quarts of the tiny eggs and by far the largest ever made.

Although the Government hatching plant at Put-in-Bay on Lake Erie was built to take care only of one million eggs, the Bureau, by farming the eggs out, among the various state hatcheries and among its own plants elsewhere, is taking care of this year's enormous catch. The supply of whitefish had been diminishing so rapidly in Lake Erie owing to poor protection, the fish being under four different state and one Canadian province jurisdictions, that careful preparations were made this year to do as much as possible to replenish the supply.

In other great lakes also large lakes of whitefish eggs are being reported. 170,000,000 having been taken to date this season in Lake Michigan. Efforts are to be made also to stock some of the north-western lakes with whitefish.

SALMON FOR ONTARIO.

Ontario is to have salmon; not more of the canned or cold storage varieties, but the kind that the sportsman has to go after with rod and fly. This sort of salmon cannot be provided at once, for the salmon has to grow, and that requires some time. One million fry of the Atlantic salmon are to be placed by the officers of the Federal Department of Marine and Fisheries in Lake Simcoe, and Lake Muskoka, and possibly in some of their neighbors, all in the playground of Ontario. Already attractive because of many things, these lakes with salmon in them will become almost doubly so to sportsmen.

Experts in these matters claim that salmon will thrive in these inland waters, pointing to the records which show that years ago salmon abounded in many a river and lake from which they long since disappeared. For instance, Mr. Robert Sellar, in his history of the counties of Huntingdon and Chateauguay, shows that salmon were once plentiful in the Chateauguay River. The fish were not all caught, but were driven away by sawdust and mill-dams.—(Exchange.)

The largest Fall catch of fish on record took place at Port Stanley recently, some fishermen making daily hauls of twenty tons from their nets. Over sixty carloads have been already shipped to the United States, which will sell for over $100,000. The fish sell from 4 to 5 cents per pound, and it is expected before the big run is over, another sixty carloads will have been shipped, which will bring a total of $200,000. This will be divided up among the owners of the eighteen tugs fishing at the port.

Life Story of the Herring

There has been more controversy about the herring than about any other fish—fresh water or marine. Volumes have been written about its life history, its spawning, its food and its migrations. Riots have occurred between various classes of fishermen from time to time, with reference to its proper mode of capture, and wars have been waged on account of it. More mis-statements have been made about the herring than about any other living creature, and at the end of the first decade of the twentieth century there is still much mystery about its movements and way of life. It is, therefore, not surprising to find, even in leading newspapers, erroneous statements about this fish, and there is, therefore, no cause for surprise in the fact that the latest British Government committee appointed to inquire into the fisheries is mainly concerned with the herring fisheries.

Until comparatively recently in British waters herring were caught almost exclusively by means of drift net, i.e., vertical walls of netting which—shot at night and hauled at daybreak—drifted or floated near the surface with the tide. These nets have a mesh of a diameter suitable for the kind of fish they are intended to capture—roughly one inch from knot to knot in the case of herring, and their success depends upon their encountering a shoal of this particular fish. They are not adapted to capture and, in fact, will not capture any other species. Whilst fishing operations are going on, the nets are attached to a vessel, sailing smack or steamer, by means of a strong warp or rope, and the whole arrangement—steamer and nets—floats with the tide.

Of late years, however, herring have been captured in ever-increasing quantities by steam trawlers a method of fishing which involves the dragging of a conical bag of netting along the sea bottom. In this method of fishing—in contradistinction to drifting—the fish are caught in the daylight. Obviously this method of fishing only captures demersal fish, and since herrings seek the bottom in the daytime they are captured in the trawl.

The enormous increase in late years of herrings so caught has alarmed the drifting fraternity, and an extensive agitation against this method of fishing has been recently inaugurated.

Trawling for herring as a regular business commenced at the West Coast ports—Milford Haven and Fleetwood—but has now been considerably extended, so that trawlers, equipped with nets

specially adpated for the capture of herring, fish not only from these ports, but also from Grimsby, Hull and Aberdeen. Originally the ordinary trawl-net was used, but lately a modified net has been introduced, and the tailend of this net, for a distance of thirty feet from its closed extremity, has a mesh of only two and one-quarter inches, so that it is impossible for even the smallest of the fish to escape.

The original herring trawlers fished on the grounds between the West of Scotland and the North of Ireland, and particularly from Barra Head to the Island of Inistrahull. On these grounds the depth of water is from 70 to 100 fathoms (420 to 600 ft.) and the bottom is soft. The fish—at any rate those landed at Fleetwood—were of a very large size, were exceptionally palatable, and, consequently, fetched a high price. Subsequently, the East Coast trawlers took up this profitable method of fishing, and lucrative voyages for herring have been made to the Dogger Bank and elsewhere. Here, however, the herrings taken are generally young plump "matties," i.e., maidens, full of milt or roe. It is alleged by the drifters that the spawn and young of herring are captured and consequently destroyed by this means.

In the herring the sexes are distinct, that is, the fish is either a male or a female. Very rarely cases of hermaphroditism occur. The female produces on an average about 30,000 eggs, though occasionally a large fish will produce nearly 50,000. Compared with other fish—for instance, the turbot, with its eight millions of the ling with its eighteen millions—the fecundity of the herring is not great. The egg of the herring is small, being less than a millimetre in diameter, and is surrounded by a tough membrane. This membrane is covered, when the female extrudes the egg, by a layer of sticky material, and by this means the eggs are attached to foreign bodies, such as seaweed or stones. The egg being heavier than sea water, sinks to the bottom. Like the hen's egg, the egg of the herring consists (in addition to the membrane referred to above) of living substance, the germ, and a food substance, the yolk. On the latter the young fish lives while undergoing its development within the egg. Fertilization takes place outside the body of the parent, the milt of the male, like the ova of the female, being extruded into the sea. There are two chief spawning periods, spring and Autumn, and it is thought that there are two races of herring corresponding to these spawning periods. The first change noticeable in the fertilized egg is the shrinking of the egg from the membrane, so that a space filled with fluid is formed inside the egg-membrane, and between it and the egg. Then the living substance segments, and the embryo is gradually differentiated until, in about a week, the young larval fish hatches out. At this stage of its existence the young herring is a very helpless creature. It is small, about one-fifth of an inch long, and practically transparent. It has no jaws, and for a little while the young fish continues to live on the remains of the yolk which is seen in the yolk-sac attached to its abdomen. There are no fins at this stage. The yolk-sac is generally absorbed in three or four days, and then the young fish has to hunt around for food. At this stage it is still living on the sea bottom, but it soon moves into the middle layers of water, probably in search of food. The herring has now attained the post-larval stage of its development, and it rapidly takes on the adult appearance. From two to three months after birth the herring develops scales and fins; at this stage the young fish are about an inch long. By this time they have reached the surface, and they now begin to move towards the shore, where, shortly afterwards, they are found in large numbers, and, together with the young of the sprat, they constitute the delicacy known as whitebait. During the first winter the spring-spawned herring remain inshore, but on the approach of spring, i.e., when they are one year old, they move out into the open sea. The herring probably becomes mature in its third year, by which time it has attained a length of from 8 to 9 inches. Its age is determined by an examination of the otoliths, or ear-stones. These "stones" are formed of calcareous substance, and grow by accretion during the lifetime of the fish. The layers formed at different periods of the year are not of equal density, consequently, when the otolith is examined under the microscope, a number of rings are seen. These annual rings of growth correspond, after a fashion, with the rings of growth in the trunk of a tree. The subsequent migrations of the herring have not been thoroughly elucidated.

The older school of fishermen and naturalists believed that the herring performs season almigrations of vast extent. The favorite idea was that of a Polar migration southwards every year. Another was that an annual excursion round the British Isles took place. Neither of these ideas is now extensively held, at any rate, by naturalists. Probably the migrations are localized, and Pennant's hypothesis of the herring "coming from the Icy Ocean," must now be abandoned.

If the theory of a limited migration of the herring be correct, then the possibility of a serious diminution of this fish, owing to excessive fishing, is not excluded. Whether such a decrease is probable is another question.—(J. T. J., in Field.)

Helpful Hints for the Motor-boat Fisherman.

(From Motor Boating.)

To Find a Knock.

Some times a knock or pound is easily located by placing a lead pencil between the teeth, stopping the ears and placing the other end of the pencil on different parts of the motor. The sound will be easily found, as it will appear most intense at seat of trouble.

* * *

Too Much Air.

When starting a motor, the auxiliary air valve must remain closed, or the mixture may be so weakened that it will be impossible to start the motor.

* * *

Starting When Hot.

Sometimes an engine is harder to start after it hsa been in operation for some time and then stopped, than when cold. This is usually due to the heat making the lubrication oil thin, with the result that some of the compression passes the pistons. A thicker oil will often help overcome this trouble.

* * *

When Motor Cranks Hard.

See if the clutch is netural and free from binding,

Pre-ignition.

Premature firing has several causes, but irrespective of its origin, the consequences, if allowed to continue, may prove of a serious nature. In most cases pre-ignition can be traced to an early spark (ignition advanced too far), overheated cylinder, due to some fault pertaining to the cooling system or otherwise, faulty lubrication or deposits of glowing (incandescent) carbon in the cylinders or combustion chambers. Any of these causes will produce a deep, heavy sound, which is sometimes accompanied by a severe rack.

To remedy pounding of this nature, always regulate the spark first and if there is no improvement noticeable, the switch should be thrown out of contact, and if the motor continues to run and pound it is evidently due to carbon deposits. On the other hand, if the motor stops running at once the pound is attributable to some other cause.

Do not take engine down until every effort has been made to remove the carbon deposits by employing kerosene, turpentine or any of the standard carbon removers.

* * *

Loss of Power.

When motor runs in a regular manner, but is weak, the trouble may be attributable to clogged, gummed, rusty or worn pistons ring, incorrectly timed or fitted valves, inefficient lubrication, too much gasoline, weak batteries, dirty spark plugs or igniters, poorly adjusted coils, parts out of alignment or clogged silencer.

* * *

Four-Cycling.

When a two-cycle motor only fires every other revolution, the mixture is too rich. Remedy: Cut down gasoline supply slowly until a regular powerful cycle takes hold.

* * *

Be Ready.

For emergencies by having a suitable anchor fitted with a line chain situated in a get-at-able place, for when the engine stops in narrow channels or on lee shores there is little time offered to get the mud-hook overboard.

* * *

Easy Bends.

Two 45-degree fittings offer less resistance to exhaust gas than one 90-degree fitting.

* * *

Listening for Sounds.

Sometimes in heavy, thick,weather it is very difficult to locate the sound of a bell buoy or other warning. In some instances an ordinary megaphone proves a very efficient ear trumpet and will enable one to pick up readily the sound warning at a considerable distance. In some cases when the wind and waves are making a great deal of noise it is advisable to stop the motor and then listen for the horn or bell. In this instance, precautionary steps should be taken to stop the motor in such a way that it can be started again at short notice.

* * *

Drain Water Jackets.

In the late fall and winter months when severe frosts are apt to set in unexpectedly, it is advisable to drain the water jackets to prevent freezing.

* * *

The Correct Spark Gap.

Care should be taken not to open the points of a spark plug mote than the thickness of a dime. A spark larger than one produced by a gap of this size does not increase the efficiency of the motor, but, on the other hand, a greater gap quickly exhausts the battery.

* * *

Use Long Lines.

When alongside a dock where there is considerable rise and fall of tide, use long breast lines instead of making the ends of the boat fast at right angles.

* * *

Soap on Gas Lines.

A temporary remedy for a leaking gasoline pipe or joint is had by coating one side of a strip of cloth with yellow soap and binding same around the leaking part.

* * *

Motor Stops Suddenly.

When a motor stops without warning after operating in a regular manner it is usually due to a short or broken electric circuit, and the primary and secondary wires should be gone over carefully.

* * *

Use Sand Paper.

When cleaning the contact breaker points in magneto it is always advisable to use fine sand paper. Emery cloth is good, but the small particles of emery are a powerful abrasive, and are apt to injure the armature bearings or cause elusive short circuits.

* * *

A Long Splice.

In splicing two ends of a primary wire it is advisable to cut the insulation off for a distance of at least one inch. The ends of wire should then be scraped bright and twisted securely together and the splice then bound tightly with electric tape. A splice of this kind offers less resistance to the passing current than a shorter one, which is very desirable.

* * *

On Rivers.

When navigating rivers follow the long bends and thus avoid back eddies and snags.

* * *

Irregular Firing.

An accumulation of dirt or water in the carbureter often results in irregular operation. Remedy: Drain carbureter through pet cock in bottom.

* * *

Weak Mixture.

Lack of power accompanied by weak muffler explosions indicates that the mixture is too weak in gasoline.

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Department of Marine and Fisheries

LOBSTER FISHERY FISHING SEASONS
IN FORCE ON DECEMBER 1st, 1913

Number of District	LIMITS	Fishing Season	Size
1	St. John and Charlotte Counties, N.B.	Nov. 15 to June 15	4¾" carapace
2	Albert County, N.B. and Kings and Annapolis Counties, N.S.	Jan. 15 to June 29	No size limit.
3	Digby County	Jan. 6 to June 15	No size limit.
4	Yarmouth, Shelburne, Queens, Lunenburg, and that portion of Halifax County West of a line running S.S.E. from St. George's Island, Halifax Harbour, and coinciding with Fairway buoys	Dec. 15 to May 30	No size limit.
5	From line in Halifax Harbour running S.S.E. from St. George's Island, and coinciding with Fairway buoys, eastwardly to Red Point, between Martin Point and Point Michaud, Cape Breton Island and including the Gut of Canso, as far as a line passing from Flat Point, Inverness County to the Lighthouse in Antigonish County opposite	April 1 to June 30	No size limit.
6	From Red Point, between Martin Point and Point Michaud, along the eastern coast of Cape Breton Island, around Cape North as far as Cape St. Lawrence; also the north shore of the Gulf of St. Lawrence from and including Blanc Sablon, westwardly to the head of tide, embracing the shores of the adjacent islands, including Anticosti Island	May 1st to July 31	No size limit.
7	The Magdalen Islands, including Bird Rocks and Bryon Island	May 1st to July 20	No size limit.
8	Waters of Northumberland Strait, between a line on the N. W. drawn from Chockfish River, N.B., to West Pt., P.E.I., and a line on the S.E. drawn from Indian Point, near Cape Tormentine, N.B., to Cape Traverse, P.E.I.	May 25 to Aug. 10	No size limit.
9	The waters around P. E. Island except those specified in No. 8	April 26 to July 10	No size limit.
10	From, but not including, Cape St. Lawrence, Cape Breton Islands, south-westwardly to Flat Point, Inverness County, and from the Lighthouse in Antigonish County opposite Flat Point, westwardly along the strait of Northumberland and coast of Nova Scotia to Indian Point, near Cape Tormentine, N.B., and northwardly from Chockfish River, N.B., embracing the coast and waters of a portion of Kent County and of Northumberland, Gloucester, Restigouche Counties, N.B., and the coast and waters thereof of the Counties of Quebec, south of the St. Lawrence River	April 20 to July 10	No size limit.

Soft shell or berried lobsters must be liberated alive by the person catching them.

Lobster traps may not be set in 2 fathoms of water or less.

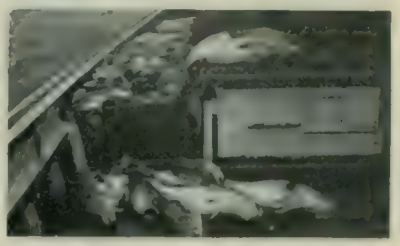
Lobsters to be canned may be boiled only in the cannery in which they are to be packed. The sale or purchase of broken lobster meat or fragments of lobsters for canning is prohibited.

Before lobster canning is engaged in, a license from the Department of Marine and Fisheries is required.

Canned lobsters must be regularly labelled or a permit obtained from the Department, before they may be removed from the cannery, and must be labelled before being placed on the markets.

Lobster canneries must comply with the Standard of Requirements, copies of which may be obtained from the local Fishery Officers or the Department.

CANADIAN FISHERMAN



A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 104-105 HOMER ARCADE BLDG.
NEW YORK OFFICE: 206 BROADWAY

Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

ADVERTISING RATES ON APPLICATION

SUBSCRIPTION: Canada, Great Britain and United States, $1.00; Elsewhere, $1.50, payable in advance.

Vol. I. MONTREAL, FEBRUARY, 1914 No. 2

THE GOSPEL OF CLEAN FISH.

One of the greatest objections which those engaged in the fish trade have to combat is the deep rooted idea in the minds of many people that fish are dirty and therefore unfit for food. In the inland towns of Canada it is quite a common thing to hear: "Oh, no, we never eat fresh fish. Can't stand the smell of them even!" and remarks of a similar nature. In the popular imagination, the fish business is regarded as being messy, scaly and smelly, and such ideas do an immense amount of harm by keeping down the sale of fresh fish. Smoked, salted and cured fish do not come under this objection as they are usually displayed for sale packed in clean boxes and packages, though to a certain extent they are included in the antipathy.

The fish trade in Canada has to contend with the great obstacle of the markets being so far from the sea and the ports where fish is landed. It is not possible for fish to be landed in Montreal, Toronto and Winnipeg, as they are in London, England, or Boston, New York, Seattle, and other large fish consuming cities close to, or situated upon the seaboard, but our transportation companies are certainly doing their best in placing the fresh fish upon the inland markets of Canada as quickly as their present facilities will allow. Fish cannot be transported into Montreal and western cities a few hours off the hook, but they certainly can be placed on sale as clean and as fresh as though they were.

In all businesses which make a specialty of handling perishable foodstuffs, the gospel of cleanliness is their greatest advertisement. The modern fruit canneries, jam and pickle manufacturers, milk companies, meat packers, etc., all dilate upon the cleanliness and sanitation of their establishments where their particular class of foodstuff is prepared. They advertise it in papers, magazines, and trade journals as well as by posters and show cards. They even invite the public to inspect their premises and factories, and by booming the idea of cleanliness into their employees and the general public, have succeeded in overcoming any objectionable features connected with their goods.

Many of our large fish concerns have worked along these lines with moderate success, but until all the companies handling fish fresh for inland markets take up the gospel of cleanliness, their efforts are killed by the slackness of the ones who don't care. Fish is a perishable article which deteriorates rapidly: it requires careful handling. and a great deal of advertising to sell.

In order to be a success, the gospel of cleanliness must be carried out from the very source of a business. A dirty fish wharf with gurry butts and heaps of fish scrap and infested with flies certainly looks bad to a visitor. A pile of slimy fish being ruthlessly forked and slapped around the wharf when landed from the vessel certainly does not make the looker-on an enthusiastic fish eater. Fish does not improve in quality by being trampled upon and jabbed with pews or forks a dozen times

before reaching the table. And coming further ahead, fish, slimy, flabby and sunk eyed, thrown in an old barrel or box at the door of a retail store, looks anything but nice to the person wishing to buy. What is the remedy? How can we make the public eat more fresh fish?

First of all, those in the fish business must bear in mind that in order to sell any class of goods, the consumer must be attracted to them in some unusual manner. In the fish business, it is CLEANLINESS, FRESHNESS, and DISPLAY.

The fishermen themselves must join in the campaign of cleanliness and careful handling. It is to their interest. The more fresh fish eaten, the more dollars for the fishermen. The vessels and boats should be kept scrubbed, painted and thoroughly clean. It is quite a job to do so, but it will pay in the long run. The city man who happens to be upon a fish dock in some fishing port and notices fish being landed out of a spick and span boat or vessel will do a lot of talking in his home town and will become a booster, instead of a knocker of the eating of fish. Again, the fishermen should always bear in mind that he is handling something which has to be eaten. Too much forking, trampling upon, and slapping around doesn't do the fish any good. If possible, bag nets should be used for loading and unloading fish and forks used only when other means fail. Plenty of ice in the pens and the best men in the hold to stow the fish: pen boards and hold fittings well scrubbed and cleaned, and good rinsing in clean water before the dressed fish are stowed all help to make clean fresh fares. Then, get the fish landed before the fare gets stale. Better to get a good price for a small fare of strictly fresh stock, than a small price for a large catch which is stale and has to go to the splitters. This may be hard to carry out at the present time, but with fishermen and dealers working together for the good of the trade, it will not be long before this method will pay.

At the fish dock all gurry, fish scrap and refuse should be removed from the premises AS QUICKLY AS POSSIBLE. The buildings should be kept nicely painted or whitewashed and no litter allowed. Gurry butts, old hogsheads, boxes, etc., should be stored away from the building where fish is cleaned and packed for shipment. They often smell offensively and attract the flies. Concrete floors should be laid down in the fish sheds as they can be washed off and kept cleaner than wood, and keep a man busy with a hose washing down the wharf and the floors of the buildings. HANDLE CAREFULLY AND KEEP EVERYTHING CLEAN would be a good text to have pasted up on the docks and buildings and in time the employees would work up to the doctrine as they have in countless other businesses.

An up-to-date fish concern may carry out all that has been already mentioned only to find their efforts thwarted by the slackness of the retailer handling their fish. As remarked before, fresh fish carelessly displayed for sale in an old barrel or box scarcely appeals to the housewife as a palatable food, and such slackness has done more to prevent the readier sale of fresh fish then anything else. In this, many of our Canadian retailers could take a lesson from the methods used in the Old Country. Fish in a box or barrel is unattractive, but the same fish, cleaned and laid out upon a marble slab with running water or chopped ice upon it, and tastefully decorated with parsley, red peppers and lemons, takes the eye right away and acts as a silent salesman. Its very cleanliness and attractiveness will sell the goods, and for the very small amount of labor attached to the work, it is certainly worth the effort.

There are a number of concerns in Canada who are living up to the doctrine of clean fish, just as there are many fishermen who are careful fish handlers, and retailers who display their fish in the attractive manner outlined, but they themselves cannot swing all the others into their methods. It is not a case of one doing so, but for the good of the whole fish business of Canada, ALL must do as the few are doing.

The high cost of living question is an acute one in the country at the present time and the public are looking for substitutes to take the place of meats. Fish, flesh and fowl are the three staples of a meal, but only when the gospel of CLEANLINESS, FRESHNESS and DISPLAY are carried out by all concerned will the consumption of fish by the general public rise to the proportions which it ought to have in Canada.

THE MOTOR ENGINE IN THE FISHING INDUSTRY.

Signor Marconi, inventor of the wireless telegraph system which bears his name, has made an estimate that wireless telegraphy upon ocean steamers has saved the lives of over three thousand people. For this alone, Marconi deserves the thanks of the world, and from a fisherman's point of view, the man who first invented the motor engine is equally deserving of a signal honor.

Not so many years ago, before the motor became recognised as a cheap means of propulsion, the fisherman had to depend upon sail, wind and oar to take him to and from the fishing grounds. Fishing in the old days was a hard task requiring a great deal of patience. When the wind failed, it was "Out oars and pull!" and rowing a heavy boat or dory is back breaking work at any time. Sailing was just a shade better. When there was no wind or too much wind, the fishermen had to remain ashore until the weather turned favorable, thus losing time and money. When a catch was made,

the fish were certainly worth more than the price paid for them. In rough weather on the grounds, he had to lie to or run for a shelter port and probably be days getting back to home or market again.

When the motor engine came into general use, half the hard work and danger was taken out of boat fishing. The fishermen could run off to the grounds quicker and fish further offshore. They were able to go out to sea independent of the wind, and nowadays, it has to be quite a breeze of wind and rough weather which will prevent a motor boat fisherman from setting his gear, nets or lobster traps. In almost every branch of the fishing business, the motor has been the fisherman's friend. The hard toil of sail and oar has been eliminated by the motor. Tide, wind and sea which would interfere with the old style fishing, seldom troubles the modern motor boat fisherman. They can stem the tide and take their fares to a windward market. They can get through their work in a quicker time and with far less danger in sudden squalls and winter breezes. The modern fisherman has no need to keep an eye skinned to windward and the other on the jib sheets. He no longer has to drive for port half swamped in a close hauled breeze with every nerve strained to prevent an accident. With the motor doing the hard work for him, he can twirl the wheel or keep a hand on the tiller and rest up after the labours of fishing.

As in the boat fishing along shore, the motor in the off-shore Bankers has proven its worth. In fresh fishing, it is almost a necessity for schooners to have an auxiliary motor engine. Time is saved in running off and from the grounds when calms and adverse winds prevail. Trips can be brought in fresher. Towage bills in and out of ports are done away with, and the danger and anxiety of poking around rocky coasts while looking for bait is reduced to a minimum. On the grounds in squally weather, the men out in the dories can hang on to their gear longer when they know that the vessel can pick them up easily with her engine going.

On the Pacific coast, sail is practically a dead number to the halibut and cod fishermen. Schooners built on the Atlantic coast equipped with powerful auxiliary motors and rigged with the four lowers and light sails, have all the sailing rig taken off them when used in the Pacific fisheries—in many cases, the mainmast has been taken out and the foremast left for the purpose of hoisting out the fish or loading ice.

The day is not far distant when the motor alone will be the propelling power for fishing vessels of all classes. Things are shaping that way now, and for the sake of the fishermen themselves, it will be a great deal better. The work of fishing is hard enough without adding to it the strenuous labor of sail handling in windy weather and winter gales.

Fish is Cheaper and more Nutritious than Meat. Advertise the eating of Fish and get in on the Ground Floor while Opportunity knocks.

MILD CURED FISH FOR WESTERN MARKETS.

When J. J. Lane established the Lockport Cold Storage Fish Company in Shelburne County, N. S., he planned on adopting a novel method of putting mild salt-cured fish on the markets in Canada. His scheme was to supply grocers with neat waterproof paper boxes, containing herring and other fish in a little pickle sufficiently strong to keep them in good condition a moderate time. He intended to have thess boxes manufactured in such size and shape that the thrifty housewife would carry them home as readily as she does a paper package of oysters or ice cream.

As Mr. Lane sold out his interests and returned to the States, this plan was not tried. Whether his scheme would have worked out as satisfactorily as he believed is conjectural, but the idea of putting mild cured fish on the market may be worth experiments.

Addressing the Conservation Commission some time ago, Dr. J. W. Robertson, whose opinions are usually valuable said: "We might have an investigation conducted to see whether a fish mild cured at the place of catching would not be a safer thing to eat in the West than a so-called fresh fish. We all use salt on fish. I know that if I have a catch of trout and want to carry them for a few days, when I cut them properly and put a sprinkling of salt on them they will be good for several days. I do not know but that we might have a mild pickle cure for fresh fish and send them inland in that state. I do not mean the pickle of thoroughly salted, and double-cured herring or mackerel, but a mild cure such as a you get in the haddock before it is smoked. It is a question of increasing the consumption of fish by three or four times and of affording the people a more palatable food.

I do not know any part of the world in which I have travelled where it is so difficult after you leave the sea coast to get decent fish as in Canada. I did not find any trouble in Europe last year, and it should be possible to get good fish regularly in the interior of Canada."

Dr. Robertson pointed out that when the Commission on Industrial education visited the Maritime Provinces they found that little or no effort had been made to furnish the great prairie provinces with mild cured cod fish. Generally speaking the methods of salt curing fish in the Maritime Provinces have been adapted to the needs of the West Indian and southern markets. Possibly as Dr. Robertson suggests mild cured fish might find a good market in the interior of Canada.

FISHERIES STATISTICS.

DECEMBER, 1913.

Atlantic Coast.—Except at Canso and the Isle Madame district, where a greatly increased haddock catch was landed, and at Ingonish, Victoria County, and the Port Hood district in Inverness county, very little fishing was carried on during December to the eastward of Halifax.

The new lobster fishing season has been in progress since the 15th of November in Charlotte and St. John Counties, N.B., and since the 15th of December, in that part of Nova Scotia from Yarmouth County to Halifax Harbor, lobster fishing has been going on.

The total pack of canned lobsters to the end of the month was 4,399 cases, while 9,782 cwts, were shipped fresh in shell. During the corresponding period in the preceding year, the pack was 2,302 cases and the shipment in shell 11,152. To date, both the pack and the fresh shipment of Yarmouth, Shelburne and Queens Counties were more than double those of the preceeding year, which, however, was only half the pack and shipment of the year before that. The shipment in shell from Charlotte and St. John counties only amounted to half the previous year's total.

The difference between the weather conditions of the present and the past seasons would probably account for the difference in the production of the lobster fishery so far.

Smelt fishing was rather poor, owing to the mildness of the weather, and the consequent slow formation of ice.

Since October 1st the oyster fishery has yielded 20,693 barrels, against 18,488 barrels during the corresponding period last year.

In the course of the month, eight boats were wrecked at Meat Cove, Victoria County, N.S.; while two fishermen of Cape Sable Island, were drowned through the foundering of their boat.

Pacific Coast.—Very good catches of cod were brought to land in the Vancouver Island District, notwithstanding the prevalence of unfavorable weather. In the Prince Rupert District gales prevented fishing dirung the first week of the month, but later, while improved weather conditions, good catches of halibut were made. Herring had not entered the harbor in any great quantities during the month.

* * * * * *

Taking both coasts together there is an increase of $167,124 in the value of fish landed during December, 1913, when compared with the landings during the same month a year ago.

Haddock and hake have nearly doubled in quantity and value. Of the 125,893 cwts. of herring landed during the month, 121,457 cwts. were landed in British Columbia, chiefly in the Vancouver Island district.

The total value of fish, in first hands landed on the Atlantic and Pacific coasts during the nine months' period from April to December, 1913, amounted to $17,983,328, against a value of $15,370,110 during the same period in the preceding year, and constitutes an increase amounting to $2,613,218.

APPRECIATION FROM MR. H. B. SHORT

Mayor of Digby and Member of Fisheries Advisory Board.

Editor "Canadian Fisherman."

Dear Sir: I am just in receipt of the first number of the "Canadian Fisherman," and I wish to congratulate you upon the whole make-up of the magazine. It is certainly a credit to you and I am sure I wish you every success.

A journal such as this is just what the fishing industry of this country requires, and under your able editorship I feel sure will do a great deal to stimulate the business from the Atlantic to the Pacific. I have carefully read the different articles in your first issue, but was especially interested in the lengthy one written by Prof. Edward E. Prince, Dominion Commissioner of Fisheries, Ottawa. This should be read by every person in any way interested in the fishing industry, as it contains most valuable and instructive information.

The fishing industry is justly receiving more publicity of late and the public generally are giving more thought to it, with the result that this valuable food is becoming more popular each year among our own people. A much greater demand for all kinds of fish foods is noticeable among dealers everywhere. Take the Finnan Haddie industry: This particular branch of the business has more than doubled during the past half-dozen years. The result is that at the present time dealers are finding it difficult to fill orders; and the home market practically consumes the entire pack. The increase in the consumption of this toothsome fish has come about by the energetic efforts that have been put forth by the curers, who have spent large sums of money in advertising and placing their goods in the hands of the best dealers all throughout Canada. What we want is more publicity and an educational campaign carried on in the large centres to demonstrate to the consuming public the advantages to be obtained from a fish diet. This will no doubt come about in time, but those interested must keep talking fish as a cheap and nutritious diet in order to obtain this end, and your journal will, I am sure, do its part.

I am firmly of the opinion that the fishing industry of this great country of ours has a bright future and that the returns which will yearly be produced from the sea by our hardy fishermen will go on increasing year by year until they will reach immense proportions.

The past year has been a fairly satisfactory one, although I notice Nova Scotia as a whole did not produce as much fish as in 1912. This was caused partly by very severe weather during the early part of the year and later by a scarcity of bait. Good weather and an abundant supply of bait are two very essential things in order to produce a good catch. Digby county has had an average year and the high prices prevailing have brought good returns to the fishermen generally. All are looking forward optimistically to a successful year in 1914.

Wishing your journal every success, which it so well deserves, I am ,Yours truly,

(signed), H. B. Short.

WHOLESALE FISH PRICES, MONTREAL MARKET.

(Quoted by D. Hatton Company.)

Trade active, some lines scarce. Prices advancing in general on account of Lenten season drawing near.

All lines, particularly Atlantic Sea fish, frozen and smoked, are advancing just now and the highest has not been reached yet it is claimed in some quarters. This will certainly reduce the demand for frozen haddock, haddies, fillets, etc. Frozen salmon, halibut, mackerel, dore, jacks, whitefish, are plentiful and at a reasonable price.

Pickled and salted fish is moving briskly and supplies in all lines except the green codfish are adequate to the demand.

Bulk and shell oysters are on the down grade as far as demand is concerned.

Lobsters scarce and at a high price.

Smoked Fish.

Haddies, 15 lb. boxes new.....per lb.	.8½
Haddies, 30 lb. boxes new.....per lb.	.08
Haddies, Fillets.....per lb.	.13
Yar. Bloaters, 60 in a box, Niobe—selected...	1.20
St. John's Bloaters, 100 in a box.....	1.10
Smoked Herrings, medium, per box.....	.13
Smoked Boneless Herrings, 10lb. box.....	1.00
Kippered Herrings, Niobe—selected.....	1.20

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.....	.15	.16
Salmon, Red—Steel heads, per lb.....	.12	.13
Salmon, Red—Sockeyes, per lb.....	.10	.11
Salmon, Red—Cohoes or Silvers, p. lb.	.09	.10
Salmon, Pale Qualla, dressed, per lb...	.70½	.08
Halibut, white western, large and medium, per lb.....	.08½	.09
Mackerel, Bloater, per lb.....	.07	.08
Sword fish, whole chunks, per lb.....	.08	.09
Haddock, medium and large....per lb.	.05	.05½
Market Codfish.....per lb.	.04¼	.05
Steak Codfish.....per lb.	.05	.05½
Pollock.....per lb.	.04	.04½
Tommy Cods.....per brl.	2.00	
Smelts, medium to large.....per lb.		.12
Smelts, small.....per lb.		.06½
Flounders.....per lb.		.06
Canadian Soles.....per lb.		.08
Blue fish.....per lb.	.16	.17
Striped Sea Bass, large.....per lb.	.17	.18
Striped Sea Bass, small.....per lb.	.12	.13
Sea Trout.....per lb.	.10	.11

Frozen Fish—Lake and River.

Shad.....per lb.	.12	
White fish, large.....per lb.	.10	.11
White fish, small Tulibees.....per lb.	.06	.06½
Lake Trout, large and medium..per lb.	.11	.12
Dore, dressed or round.....per lb.	.09	.10
Pike, dressed and headless.....per lb.	.06½	.07
Pike, round.....per lb.	.06	.06½
Eels.....per lb.		.10
Perch.....per lb.	.09	.09
Carp.....per lb.		.11

Pickled Fish.

Salmon, Labrador Tierces 300 lb.....	21.00
Salmon, Labrador Brls 200 lb.....	15.00
Salmon, Labrador Half Brls 100 lb.....	8 00
Salmon, B. C., Brls.....	14.00
Sea Trout, Baffin's Bay Brls 200 lb.....	12.00
Sea Trout, Labrador Brls 200 lb.....	11.50
Sea Trout, Labrador, Half Barls. 200 lbs.....	6.75
Mackerel, N.S., Brls 200 lbs.....	12.00
Mackerel, N.S., Brls Hf. 100 lb.....	6.25
Mackerel, N.S., Pails 20 lb.....	1.50
Herrings, Labrador Brls.....	5.75
Herrings, Labrador, Hf. Brls.....	3.25
Herrings, Nova Scotia Brls.....	5.50
Herrings, Nova Scotia, Hf. Brls.....	3.00
Lake Trout, Hf Brls.....	
Quebec Sardines Brls.....	5.50
Quebec Sardines, Hf Brls.....	3.00
Turbot, Brls.....	15.00
Tongues and Sounds, per lb.....	.10
Scotch Herrings, imported, Hf Brls.....	8.00
Scotch Herrings, imported, Kegs.....	1.25
Holland Herrings, imported milkers Hf Brls..	6.50
Holland Herrings, imported milkers, Kegs....	.75
Holland Herrings, mixed, Hf Brls.....	6.00
Holland Herrings, mixed, Kegs.....	.65

Salt Fish.

No. 1 Green Cod, large Brl.....	11.00
No. 1 Green Cod, medium, Brl.....	10.00
No. 1 Green Cod, small, Brl.....	8.50
No. 1 Green Cod, Haddock, medium, Brl....	8.50
No. 1 Green Cod, Haddock, small, Brl.....	7.50
No. 1 Green Cod, Pollock, medium, Brl.....	7.50
No. 1 Green Cod, Hake, medium, Brl.....	6.50
No. 1 Quebec Eels, large, per lb.....	.08

Due to the failure of the fish in American waters and the Wilson Tariff, most of this country's supply of salted codfish has been exported this season.

We are doubtful if enough fish is left in this market to supply half of the demand.

Dried and Prepared Fish.

Dried Hake, medium and large, 100lb. bund's	7.00
Dried Pollock, medium and large, 100 lb, bu's	7.00
Dressed or skinless Codfish, 100lb. cases.....	7.00
Boneless Codfish, Ivory Brand, 2lb. blocks, 20 lb. boxes, per lb.....	8.00
Boneless Codfish, Dreadnought Brand, 2 lb. blocks, 20lb. boxes, per lb.....	.07
Boneless Codfish, strips 30 lb. boxes.....	.10
Shredded Codfish, 12 lb. boxes, 24 cartons, ½ lb. each, per box.....	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes....	.15

Bulk Oysters, Clams, etc.

Hatton's Best Standards, imp. gallon.....	1.40
Hatton's solid meats, imp. gallon.....	1.70
Hatton's selects, best, imp. gallon.....	1.80
Hatton's selects, solid meats, imp. gallon.....	2.00
Hatton's best clams, imp. gallon.....	2.00
Hatton's best scollops, imp. gallon.....	2.50
Hatton's best prawns, imp. gallon.....	2.00
Hatton's best shrimps, imp. gallon.....	2.25
Oysters, pails, ¼ gal. per 100.....	1.10
Oysters, pails, ⅛ gal. per 100.....	.90
Oysters, pails 1-16 gal. per 100.....	.70
Sealed best standards quart cans, each.....	.35
Sealed best selects quart cans, each.....	.45

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysters, per barrel.....	8.50
Malpeque shell oysters, selected C.C.I., per barrel.....	12.00
Malpeque, shell oysters, selected J.A.P., per barrel.....	10.00
Malpeque, shell oysters, selected XXX, per barrel.....	9.00
Malpeque, shell oysters, ordinary, per barrel..	8.00
Malpeque, shell oysters, caraquets, per barrel	5.00
Clams, per barrel.....	9.00
Mussels, per barrel.....	6.00
Live Lobsters, medium and large, per lb.....	.30
Boiled Lobster, medium and large, per lb.....	32

THE SUPPLY QUESTION AND A REMEDY

By COLIN McKAY.

Many fish dealers in the Maritime Provinces are finding it increasingly difficult to secure supplies. Outside of a few concerns which had the forethought to equip fishing craft on their own account, the dealers have to pick up their supplies wherever they can, and their business depends largely on the goodwill of the working fishermen, who own and operate boats of their own. Even before the United States abolished the tariff on fish, the smaller dealers were having trouble getting supplies, and since American dealers have been buying our fish—in many cases direct from the fishermen—the problem has assumed a more serious phase. New Brunswick dealers who depended largely on the fishermen of Digby and Yarmouth counties for their supplies are in a particularly unfavorable position, for a large proportion of the catch which formerly they would have had an opportunity of handling is now being shipped to Boston. Smaller dealers in Western Nova Scotia are also feeling the effects of the shipments being made to the American market. And as even the smaller dealers usually have an expensive curing plant, the difficulty in getting stocks affects them seriously.

To understand the situation which confronts the average Maritime fish merchant to-day it is necessary to consider the changes which have taken place in the methods of conducting the industry. A generation or less ago the fish merchant usually owned one or more large fishing vessels, and a mortgage upon the catch of a number of boat fishermen in his district, because the average fisherman was usually in debt for goods supplied out of the merchant's store the previous winter. The fish merchant had no trouble getting crews for his bankers, because the fishermen being generally in debt had to obey orders.

The fish merchant was a sort of feudal lord of the outports, as he is yet in some parts of Newfoundland. Not only did he control the sources of supply but he controlled the marketing facilities. In those days the bulk of the catch was salt cured, dried and shipped to the markets in the West Indies and the Brazils. The fish merchant usually owned a brigantine to carry his fish to southern markets, and he had to have considerable capital or credit, since it was a long time before he got returns on his fish.

But with the development of coast wise transportation facilities, and the opening of markets for fresh fish, the old type of fish merchant with his feudal powers, generally, it may be said, exercised in a patriarchal spirit, gradually ceased to be the prime factor in the prosecution of the fisheries. New concerns specializing in curing and marketing fish came upon the scene. Soon the boat fishermen were able to escape from the bondage of debt, and instead of turning over their catches to the old type of fish lord and taking payment in truck from his store they were able to get cash payments without delay. New forms of competition gave the fishermen an opportunity to command better prices, and, especially in western Nova Scotia, they soon achieved a position of independence and prosperity.

Men who formerly made the long voyage to the Grand Banks secured boats of their own and engaged in shore fishing. Outside of Lunenberg, which by adopting the co-operative plan has built up a fine fleet of bankers, the banking fleets declined, mainly because the men formerly employed in them were able to make a better living in the shore fisheries. A large number of ports where fish merchants had lived in state, lost a great deal of business, but along the shore the fishermen were building fine homes, and making a good living by operating a smart type of small boat, now generally succeeded by motor launches.

At the present time the average fish merchant has little or no control over the supply. He has neglected the productive side of the business. Up to recently the average fish merchant had probably little difficult procuring stock, but with companies possessed of large capital entering the business, and a rapid increase in the demand for fish, he is facing a situation for which he has made no preparation. Just now when he should be seeking to expand his business, and secure new customers, he has to turn down orders. Many dealers have developed a habit of relying on a certain restricted source of supply and selling in a limited area; their business has become a mere matter of routine and the interruption of that routine is leaving them rather at sea. Not a few dealers owning a large curing plant and doing a profitable business will be found performing the most routine and laborious work in their establishments instead of studying and working on the problem of assuring a steady and expanding supply and larger markets.

The fish merchant can not afford to wait till the fishermen comes to his wharf with their catches. He has got to go out into the fishing districts, encourage the fishermen to extend his operations, and organize means of supply. Nearly all classes of business men, as well as farmers and fruit growers, hold conventions to discuss the position and consider methods of improving their business; but how many conventions of fish merchants have been held to discuss the bigger problems of the fish industry? The boat fishermen of Nova Scotia are ahead of them in this respect.

The problem of supply should not be hard to solve. The motor fishing boat has made possible a great increase in production, but the fish merchants usually buy in a limited zone; the great majority do not keep buying agents in other districts and do not advertise their needs. Hence if a merchant in a given zone is supplied with a certain variety of fish, the fishermen rest on their oars, though they might catch large quantities of the same variety, if a merchant on some other part of the coast who needed that variety would make his needs known, reach out and offer to take their catches. Some of the more important dealers are already working on this policy, to their own and the fishermen's advantage, and if the dealers generally adopted it, the fishermen would be encouraged to greatly increase production. Some of the auxiliary off shore fishing schooners owned in Shelburne paid one hundred per cent. last year,

because merchants in different ports were reaching out for supplies. The fishermen made money not so much because they got good prices but because they were encouraged to work more continuously.

The large Canadian concerns are introducing new methods and working along lines followed for some time in United States fishing districts, and the sooner the average wholesale fish merchant adjusts his business routine to the new conditions the better. In the competition with the Americans who are poaching on their supplies, it is not a question of ready markets on market prices. A few years ago the average dealer in the Maritime Provinces was vigorously shouting that Canada offered a readier market at high prices than the United States did —undoubtedly the question is largely one of business enterprise and improved technique generally.

THE SWORDFISH

By ANDREW HALKETT, Naturalist to the Marine and Fisheries Department and Curator of the Fisheries Museum, Ottawa.

This remarkable pelagic fish has a wide geographical distribution. Relative to its open sea movements, it occurs on both sides of the Atlantic Ocean, appearing at the coasts of the Maritime Provinces and the Banks of Newfoundland; is plentiful in the Mediterranean and is said to enter the Baltic, and occasionally occurs on the coasts of the British Islands. Otherwise it is distributed in many seas, and may be regarded in fact as a fish of world-wide distribution, although it seems to be rather rare on the coasts of the northern Pacific.

As a denizen of the sea the swordfish is favored to the best advantage, and is constructed so as to move with great rapidity through the water, so that it may be readily understood why with more or less frequency it comes within the precincts of the coasts of many lands.

It belongs to the scombroid or mackerel group of fishes, which group in itself embraces many highly specialized forms, and specifically the swordfish presents such modification of structure as to be still more favorably specialized.

Its form is elongated and gradually slopes to the tail; the body is lithe and very muscular; the whole system, it may be said, is fairly saturated with oil; the eyes are in bony cups or capsules, also heavily charged with oil; there are no scales so that in the rapid movements of the fish through the water friction is reduced to a minimum; and the external appendages, embracing the sword and the bones of the lower jaw as well; the pectoral, dorsal, and anal fines, and the two uniform lobes of the deeply forked caudal fin, are all pointed. The position and shape of the respective fins are doubtless also conducive to the swordfish's movements. The pectorals are situated unusually low down—right where ordinarily the pelvic fins of scombroid fishes in general, and of many other fishes, are—the swordfish being devoid of pelvic fins; and it would therefore seem that this fish is free from what might even in the slightest degree, by the presence of pectoral fins placed behind the gills at the sides, retard its movements as it darts like an arrow through the water. The dorsal fin which is placed immediately opposite the pectorals is high and situated anteriorly on the back just behind the head, and the anal fin is well in front of the caudal, features which no doubt balance the fish and which morphologically accord with the gradually sloping form of its body; whilst, as it propels itself through the water, the uniform upper and lower lobes of the caudal fin promote a direct forward movement. In many scombroid fishes there are two series of finlets placed behind the dorsal and anal fins respectively—these in the swordfish are reduced to two finlets, one placed dorsally and the other ventrally. It has also, as many other scombroid fishes have, a pair of keels situated on the tail — one keel being on either side.

Although the swordfish is for the most part a surface swimming species, it has nevertheless frequently been caught by trawl lines at a depth of over one hundred fathoms. Its movements must be regulated by the pursuit of its food, for as we shall see its breeding habits are otherwise regulated. Its diet is varied. It pursues the schools of mackerel

and menhaden, and preys besides upon other fishes, such as the bluefish and bonitoes, and also on squid.

The sword of the swordfish is a prolonged modification of the bones of the upper jaws, sharp at the point, and not compressed or flattened vertically, but depressed or flattened horizontally, and is a veritable dagger or weapon of attack. With this it often pierces vessels, and pieces of plank with the broken off swords are objects sometimes exhibited in museums. In the same way it is accused of attacking whales, although some authorities are dubious of this. But I am of opinion that I really witnessed such a phenomenon off the coast of Labrador when homeward bound from the Arctics. The distance, it is true, between the vessel and the scene of attack was too great to be altogether certain as to what I really saw, so that I really mention the phenomenon with caution. The seamen said that the large whale, which was plainly visible, was being attacked by a thresher and a swordfish, and what I can testify to is that something which fairly glistened in the sun-light was thrust out of the water which I consider was the sword of the swordfish, and that the poor whale was sorely pressed and persecuted. If it is true that it does attack cetaceans, then it may well be that it sometimes mistakes vessels quite naturally for whales, and if so its object in piercing vessels, from which afterwards it has not sufficient backward muscular action to extract the sword, and that it breaks it off in its efforts to liberate itself, is thus accounted for.

The swordfish does not breed in our waters, nor for that matter at coasts in general where, in its travels, it should happen to appear, but just as the fur-seal brings forth its young at what are called rookeries at the Pribilov Islands, in the Bering Sea; and the gannet selects such resorts as Bonaventure Island and the Bird Rocks off the Gulf of St. Lawrence, the lone island of St. Kilda and the Bass Rock off the coast of Fifeshire, Scotland, as its nesting places; so the swordfish has its breeding areas at the coasts of the Mediterranean, and it is considered certain that there are spawning grounds at the coasts of Sicily. That it breeds in those waters is confirmed in various ways. It is said to be seen in pairs off the coast of Sicily, and is caught in various stages of development in the Mediterranean—the very young affording an excellent article of food; whereas far off from those areas where evidently it reproduces, it is to be found, at least almost invariably, singly; and on good authority, no matter what the season of the year, it is said never when taken in those localities to contain eggs.

As is the case with the lobster, the swordfish is fortunately free from an overplus of names either technical or in the vernacular. Numerous local names have often been bestowed on a widely distributed species, which (especially when a name that it bears locally, in another locality is bestowed upon an entirely unrelated species) are sometimes misleading; but owing no doubt to the sword-like weapon which is the most conspicuous feature of the swordfish, world-wide it is generally known by the same name; so that in the languages of most people, the name answering to that of swordfish is that by which, as a rule, it is called. The same is the case in regard to its technical name. In meaning the technical and vernacular names of animals in general very often do not signify the same thing, but Aristotle's name xiphias which is derived from the Greek word for a sword, and that of gladius the Latin name for the same, were happily those chosen by Linnaeus when he introduced what is known as his binomial nomenclature, whereby every species bears two technical names (not unlike our own Christian and surname—only with the surname put first); and since then the swordfish has been singularly free from a multitude of synonyms; and ever since the inception of zoology indeed, the appropriate name of swordfish has been bestowed upon this interesting fish.

THE MOTOR ENGINE IN FISHING VESSELS.

The increase in the number of motof fishing boats the last two years has been very rapid, and the outlook for still further increase the coming year is very apparent. The motor boat met with two handicaps to its general adoption at the start, viz.: want of knowledge how to run the engine, and the high price for gasolene. These two obstacles have been overcome, for every fisherman of ordinary intelligence can now learn to run an engine after an hours instructions, and, as engines are now built to consume kerosene oil instead of gasolene, the fuel cost has been cut down to one-third of the old figures. Under these circumstances, there will not be a harbor round the coast without one or more motor fishing boats the coming season.

But, motor propelling boats are not to be confined to the inshore fishery very long, and some of the banking schooners will have engines installed the coming season. The jowler of the banking fleet, Captain John Lewis, is placing an engine in his schooner, Metamora, and we hear that several other captains wiil follow suit. Hitherto, the banking voyage has suffered considerably thro the inability of the schooners to move about in calm weather while seeking bait, and it is with the intention of obviating this difficulty that motors are to be installed in bankers. Of course, only the venturesome few will make the start, but their brothers in the business will follow in due course.

It is not too much to say, that the Labrador fishing schooners will have motor engines in a few years. As long as the trap and inshore fishing features largely in the business, the necessity for motor schooners will not be so great, but in a few years the Labrador fishery, is going to become an offshore fishery, to prosecute, which motor schooners will be as necessary as for the Newfoundland bankfishery. The last few years, while our people were "whittling sticks" on the rocks waiting for the fish to strike home to the Labrador shore, Canadian and American bankers have been loading their schooners a few miles off the coast. We can only cope with this condition by larger schooners, and preferably motor propelled schooners.

St John's, N.F., Trade Review.

FISH CULTURE IN CANADA

By WILLIAM A. FOUND

Superintendent of Fisheries, Dominion of Canada.

As even at the present time there are some who doubt the importance of fish culture, a brief explanation and comparative statement with regard to it may be of value.

The possibilities of fish culture if efficiently conducted and intelligently directed are, broadly speaking, unlimited. The work is really guaged only by the funds and the experienced men available.

Its advantages and capabilities over natural reproduction are obvious. Indeed, with the increased and ever increasing population in our country, and the limitation of the natural spawning areas by pollution and otherwise, experience shows that artificial propagation of fish in our inland waters and most of those resorting from the sea to our rivers to spawn, is absolutely essential, if such fisheries are to be saved from practical depletion. Nature could be safely relied upon to keep up the supply when the demand was not great, and the natural conditions of the waters themselves were at their best for natural reproduction.

The advances of civilization and the increase in population has already very seriously minimized the reproductive powers of many of our waters. Cities and towns along our rivers and lake fronts have been permitted to get rid of their sewage by allowing it to pass into the water, thus covering up spawning areas and making the waters in the vicinity repugnant to the better kinds of fish. Dams that have been built across the rivers flowing into the sea or their tributaries to furnish water power, have too often not in years gone by been provided with efficient fishways, thus preventing fish from ascending to their spawning grounds, and, notwithstanding the law, sawdust and mill refuse have, in earlier years, found their way into the water. Moreover, rivers all through the country that at one time maintained considerable height throughout the season have, owing to the clearing away of the forests, become mere rivulets in the summers, not capable of sustaining valuable fish life to any extent.

But even if the original conditions of the lakes and streams had not been interfered with, experience indicates that natural reproduction would not be sufficient to keep up the supply of fish to fill the existing and ever increasing demand therefor. Nature is very prodigal in her methods. Though an abundance of eggs may be deposited on the spawning grounds, the proportion that is fertilized is small. With the possible exception of salmon, it is extremely small. With whitefish it has been estimated to but a slight fraction of one per cent.

Then again the eggs of fall spawning fish, such as salmon, whitefish and trout, remain on the spawning beds all winter, where, apart from other dangers, they are eaten in great numbers by other fish.

With artificial breeding these losses and dangers are obviated altogether or greatly minimized, as will be observed from what follows.

Spawn Taking.

All the ripe eggs and milt are easily removed from the parent fish, without injury to them. While there are different methods of spawn-taking, in general, it consists of expelling the eggs by gentle pressure of the thumb and forefinger along the walls of the abdomen, the strokes being continued until all the ripe eggs have been removed. The milt is procured in the same way, and is applied to the eggs in the pan into which they have been stripped from the fish. By careful manipulation practically every egg can be fertilized. In general practise, where eggs are being handled in large quantities, there is of course some loss; but the work is regarded as carelessly done if under ordinary conditions the loss on account of lack of fertilization amounts to more than ten per cent.

Methods of Collecting Eggs.

For the supplying of Atlantic Salmon eggs, fish taken by the commercial fishermen, during the regular fishing season, are relied upon. A sufficient number of salmon is purchased from the fishermen at about the prevailing market price, and placed in tidal retaining ponds, where they are held until the spawning season comes round. They are then stripped and liberated. In this way, not only are the hatcheries filled with eggs that would otherwise be lost; but the parent fish themselves, which when caught, were destined for the markets, are saved to again reproduce.

Eggs for the shad hatchery on the St. John River are also procured from fish taken by the regular fishermen. These fish are handled by the spawn takers as they are caught, and such as will yield eggs are stripped. They are so delicate that impounding them is not feasible. In view of this fact, it is unfortunate that but a very small percentage of the fish taken at any one time will yield eggs. Were it otherwise, the keeping up of the shad supply would be a much simpler matter.

The whitefish hatcheries on the Great Lakes are mainly filled with eggs taken from fish caught by the regular fishermen. Though there is no close season in Lake Erie or the Detroit River, it is not safe to wait so late in the season that the fish can be stripped immediately on being caught. Hence the Department arranges with the fishermen to place the fish taken a short time before they are ripe in wooden enclosures, called crates. These fish, after being stripped, are returned to the fishermen, who are paid a reasonable price for the eggs procured or for the privilege of handling the fish.

Eggs for the salmon trout hatcheries are obtained practically altogether from fish caught by the commercial fishermen. The fish usually ripen during the latter part of October, so that the eggs can be taken from them as they are removed from the nets. Spawn takers are placed by the Department on a sufficient number of boats to assure a full quota of eggs being procured.

In the above three cases, it will be observed that the artificial hatching is distinctly in addition to natural reproduction, as eggs are taken from no fish that would otherwie sbe left to spawn in the natural way.

In the Prairie Provinces fishing is not allowed during or just before the hatching season. It is

therefore necessary for the Department to carry on its own fishing operations for parent fish; but such fish are returned to the water after being stripped.

Eggs from the British Columbia salmon are also procured from fish captured by the hatchery officers. It is not feasible to retain these fish in pounds in the tidal waters, and in any event they die after spawning.

Kinds of Fish Incubated.

The following varieties of fish are hatched:

Atlantic Salmon.
Pacific Salmons.
Whitefish.
Salmon Trout.
Pickerel.
Lobster.
Grey Trout.
Speckled Trout.
Rainbow Trout.
Landlocked Salmon or Ounaniche.

The Department's Fish Breeding operations are largely confined to the incubation of the commercial species, for the stocking of waters resorted to by the commercial fishermen. The reasons for this are twofold. The Department considers its first duty is to keep up the supply of commercial fish, and, in the second place, the nontidal, non-navigable waters, except in the Prairie Provinces, are the property of the Provincial Governments of the riparian owners, as are the fisheries therein. As the Atlantic salmon, as well as being probably the choicest commercial fish, is also the king of sporting fishes, the incubation thereof is to the advantage of the sportsman as well as the netter.

As the Provinces, with the exception of Nova Scotia, which is leaving the river fisheries in the hands of the Department, and the Prairies Provinces, derive no mean revenue from the sport fisheries, it is hoped they will consider the desirability of carrying on fish hatching on their own account. The writer fears they do not appreciate the importance of such. The value of the game fisheries to the different provinces is not fully realized. Experience shows that wherever there is good sport fishing, tourists go. The importance to a community of having tourists in large numbers resort to it, is so well known as to not require emphasis.

Dams in the interior rivers are, under the changed conditions, frequently a benefit from a fisheries standpoint. As was previously pointed out, rivers, that before the deforestation of the country, were considerable streams throughout the summer, now shrink to mere threads of water in the warm weather, which will not maintain the better kinds of fish life. Dams on these streams make deep portions which provide sanctuaries for good fish, so that if the portions of these rivers between the dams, were stocked with suitable varieties of fish, they would soon become attractive to sportsmen not desiring to undergo too much fatigue in seeking recreation.

Hatchery Methods.

The method of hatching depends on the nature of the eggs. Heavy eggs, such as those of salmon and trout are hatched in wire-bottom trays or baskets, placed in troughs, through which the flow of water is properly regulated. As the fry hatch out, they pass through the meshes of the trays or baskets, and find their way into the fry-tanks, where they are retained until they are ready for distribution.

Semi-buoyant eggs, such as those of whitefish, pickerel and shad, are hatched in glass jars, through which there is a sufficient flow of water to keep the eggs in motion. The water enters the jars through a tube, the end of which is near the bottom, so that there is an even motion of the water in all parts of the jars. The fry, as hatched, pass out through the top, and find their way into the fry-tanks.

Distribution.

There are fish culturists who maintain that in all instances fry should be retained in ponds until they reach the fingerling size, as they consider that much better results can be obtained from stocking with hundreds of thousands of fry. There are others who favour with equal emphasis, the planting of fry. Each class is no doubt speaking in the light of experience, but gained under a different set of conditions from the other. There are waters in which excellent results are obtained in stocking with a comparatively small number of fingerlings yearly. There are others, in which the conditions are suitable for fry, where the stocking with such shows equally gratifying results.

In Canada we follow both methods. In connection with a number of our hatcheries, retaining ponds are maintained, in which a portion of the fry hatched are placed, and reared to the fingerling size, when they are distributed into suitable waters.

In distributing the fry, care is taken to return to the waters from which the eggs have been procured, a fair percentage. The balance is sent to other suitable waters requiring upbuilding.

While both fry and fingerlings can with the exercise of due care be successfully carried long distances, and so planted in distant waters, such journeys are undoubtedly hard on them, and it is not unlikely that numbers of fry which reach their destination in apparently good condition die after being liberated from slight injuries received.

The ideal method of distribution of such fry as that of salmon, is right from the hatchery into the waters to be stocked. To achieve this as largely as is feasible, cheap subsidiary hatcheries are being established at the head waters of salmon rivers, where the fish would be naturally hatched, to which suitable quantities of eggs are sent a few weeks prior to the hatching season. An officer from the main station accompanies the eggs, and attends to them and the operation of the hatchery until all have been hatched out, and have passed from the fry-tanks into the streams. The subsidiary station is then closed until the next season.

Benefits of Fish Culture.

While enough has been already said to show the eminent importance of fish culture, it may be of interest to indicate some of its results.

Shad are not indigenous to the Pacific waters. In 1871, Mr. Seth Green, one of the pioneer Fish Culture Experts of the United States, succeeded in transporting a quantity of delicate shad fry to the Sacramento River in California. This was followed by other shipments. There has as a result been an extensive commercial shad fishery for many years in this, and other Pacific Coast rivers and shad have now spread along the coast as far north as British Columbia waters.

Brook trout are not native in Colorado. They were first introduced there about thirty years ago. They are now so plentiful that more eggs from wild fish can be obtained there than in any other State in the Union.

Some years ago the Department of Marine and Fisheries established a salmon hatchery on a creek flowing into Babine Lake, out of which flows the Babine river, one of the largest tributaries of the Skeena, which is the most important salmon river in northern British Columbia. This creek was not chosen because it was resorted to by salmon, and a supply of eggs could therefore be obtained. Salmon were not resorting to it in any numbers. It was selected on account of the facilities it afforded for hatchery purposes. Year by year a considerable quantity of fry was liberated into it, and salmon now resort to it in such numbers that the full quota of eggs for the hatchery is procured there.

At the Harrison Lake salmon hatchery, British Columbia, a similar condition, though less in degree, has been experienced. The hatchery creek is very small and short; but an increasing number of salmon are yearly coming up to the very door of the hatchery.

In 1890 the whitefish catch in the Canadian portion of Lake Ontario, was over 225,000 pounds. In 1900 it had fallen to less than 65,000 pounds, and the fishery was regarded as about exhausted. The lake has been consistently stocked with fry for a number of years, and the annual yield is now from three quarters of a million to a million pounds.

In Lake Erie, the largest producer of whitefish of any of the Great Lakes, the yield on the Canadian side was in 1890, slightly more than 200,000 pounds. It has been liberally stocked with fry for a number of years, and recently there has been a steady increase in the yield, which is now over a million pounds annually.

In 1890 the commercial salmon catch in New Brunswick was 1,105, 485 pounds.

By 1900 it had risen to 1,235,350 pounds;

By 1910 it had again increased to 1,366,700 pounds.

Moreover, the angling in the nontidal portions of the rivers is vastly improved. In 1882 the score of the Restigouche Salmon Club was 242 salmon. In 1896 it had risen to 1,376. The writer has not the recent scores of the Club; but he is aware that a catch of from 60 to 70 fish, averaging over 20 pounds in weight, by an angler, and there are from 75 to 100 of them on the river, is not uncommon.

The salmon rivers of the Province have been for years receiving the output of three hatcheries.

In the light of the above, and of the experience gained generally as to the results of Fish Culture, it does not seem unreasonable to say that we should no more depend on natural reproduction for keeping up the supply of such fish as can be readily hatched than we should on natural reproduction of grain.

Regulation of the Fisheries.

I do not mean that it should be inferred from the foregoing, that Fish Culture should replace all protective regulations. Intelligent regulation of certain fisheries is clearly necessary.

Combined with efficient and sufficiently extensive fish breeding, water areas can be indefinitely maintained at their maximum of production. Regulations should impose a minimum of restriction on the fishermen, compatible with protection of the fisheries.

Growth of the Service.

Fish Culture has been carried on by the Department of Marine and Fisheries ever since Confederation. Prior to the adoption of the British North America Act, the late Mr. Samuel Wilmot operated a private hatchery at Newcastle, Ontario. It was taken over by the Federal Government, and Mr. Wilmot was appointed Superintenednt of Fish Culture for Canada. Under his direction, fish culture expanded quite rapidly, considering the conditions then obtaining in the country. In 1880, eight hatcheries were in operation. Ten years later there were eighteen. In 1900 the number had increased to twenty eight. In 1904 there were thirty-two. Owing to the great amount of work involved in administering such a large number of hatcheries, scattered throughout the country, a Fish Breeding Division of the Department was organized. Since then the work has been carried on with much greater energy. Fifty-six hatcheries are now established, and the annual appropriation has reached the large sum of $400,000.00. Canada has now one of the largest, if not the largest breeding fish service in the world, under any one government.

WHITE FISHERMEN FOR PACIFIC FISHERIES.

In the Victoria House last week the attorney-general of British Columbia announced that the late decision of the Privy Council will not prevent that Province from collecting fees and issuing licenses to fishermen. The policy of the government is to encourage as much as possible, the employment of white fishermen only in the fisheries of British Columbia.

It was with this idea that a certain number of the salmon licenses were taken from the canneries, and given to white applicants. This policy for many reason did not meet with the approval of certain canners, as it took from them to a certain extent, the privilege to set prices and regulate the supply of fish offering. They did not seem to grasp the idea that by reserving more and more licenses for white fishermen each year that the Oriental fishermen would slowly and in such a way not to inflict loss to them, be squeezed out. Last year all these reserved licenses were not taken up, but now that the object is made clear to the white fisherman, it is anticipated that there will be none over this season.

Several suggestions for bringing fishermen from the Atlantic Provinces and from Newfoundland have been mooted. But this is not for the Province to do, as it will only lead to trouble like that in Seattle last winter. When the halibut fishermen struck, certain companies brought men from Gloucester. But for many reasons these men were not satisfied and soon returned to their old haunts. If fishermen from the Atlantic wish to come to the Pacific, well and good, but it will not do any for encouragement to be given by the British Canadian Government.

THE LOG OF A HIGH LINE HALIBUTER

By F. WILLIAM WALLACE.

PART TWO.

PHOTOGRAPHS BY THE AUTHOR

Saturday, May 17th.—Breakfast at 3.30 a.m. Got underway at sunrise and jogged alongshore. 4.30 a.m. "Bait up the gear!" The skipper sung down the cabin gangway and the cry was taken up for'ard and bawled down the foc'sle scuttle. "Now for them Anticoast halibut!" And all the yarns of their friskiness and savagery in shoal water were retailed with gusto by the old timers. "Aye!" they said. "You green halibutters'll know what fishin' is when ye start ahaulin' them hundred pounders in five fathom of water. Some o' ye 'ull be scared enough t' cut yer gangins when them fellers start atakin' charge o' you an' th' dory. It'll be hell with th' lid off for a spell!" However none of us knew for certain whether the halibut had come inshore yet. From all reports, none had been caught in shoal water by any of the vessels then on the coast. 5 a.m.—Out dories! Towing the string of eight dories including the power dory, we dropped them in range with the shore for some five miles to the west'ard of the lighthouse. Six skates of baited gear was set from each dory—in all 1,800 fathoms of line equipped with over 800 hooks. The trawl is anchored at both ends and to each anchor there is attached a keg buoy marked with the number of the dory in which the gear belongs. After setting the trawls, we picked up the dories again, and after dinner, they pulled off to haul the gear. The skipper and I handled the schooner and worked her to leeward of the string, and when the gear had been hauled, we picked the dories up. 2 p.m.—Dories all aboard. Seven halibut weighing about 900 lbs, and a few cod all the catch. "They're nowheres around here yet," remarked the skipper. "We'll make the next set a little more offshore. Maybe they're just coming in."

Baiting up the gear again, we lowered the dories and made the set in 30 fathoms about 6 miles south and west of the lighthouse. When all the trawls were set, we picked up the dories, and jogged within sight of the trawl buoys marking the gear. Just before sundown, a "watch buoy" consisting of an anchored dory with a lantern lashed to one of the thwarts, was dropped to windward of the string and during the night the schooner jogged to the east and west keeping the light in sight. As a general rule in halibut fishing, most of the sets are made in this way—the gear being set in the afternoon and left out all night and hauled early in the morning.

Sunday, May 18th.—Breakfast at 4 a.m. We always turned out early while on the grounds, and at 6 a.m. we had the dories over and away to haul the gear. At 9.30 a.m. we picked up with poor luck — only one large halibut and a few cod to show for 6,400 baited hooks! "Offshore we go," murmured the skipper grimly as he surveyed the catch, and while the gang baited up the gear again, we worked the schooner off a good ten miles into sixty fathom water, and made the set. Set the watch light at sundown and jogged to the gear all night. Barometer falling.

Monday, May 19th.—Breakfast at 3.30 a.m. and dories away to haul gear an hour later. All hands getting anxious—some doubting the very existence of halibut on the grounds. 5 a.m. The power dory which is the farthest offshore upended its oar and we lightened him of 1,000 pounds of halibut which was caught on half a skate of gear. After discharging the catch, the dorymates pulled back to their buoys and resumed hauling their gear. Halibut has to be hauled out of the dory by means of gaffs attached to six feet of stout rope. When a dory came alongside to discharge her catch, the skipper and I handed the gaffs down to the men in the dory, and after inserting the stout hooks into the eye and under jaw of the big fish, we would brace our feet on the rail; haul him up until his head came level with it, and then, throwing our combined weights inboard, we pulled the halibut over on us into the pens on the after deck. That is the only way to handle halibut. It is anything but nice to wallow in a pen of slatting and gasping halibut and haul them over the rail on top of oneself, covered with sea lice and black, gluey slime as they always are, but it is a case of "clean dollars for dirty work" and when there is a big "deck of fish" a man will become "slimed to the eyes" and spend a good hour in getting himself cleaned off. 9 a.m.—The power dory was "high" for this set as the others did not get much. By the time the gear was hauled and the dories aboard, there were but some 3,500 pounds of halibut and about 3,000 pounds of cod in the deck pens. The halibut were cleaned and stowed upon ice in the hold; the cod were cleaned, split and salted. Dressing halibut requires a great deal of care and is a job usually left to experienced halibutters. As the fish lie in the pens, the "blooders" tackle them and with two dexterous slashes of a sharp knife they cut the throat and split the chest of the fish.

With gloved hands they grasp the viscera—heart lungs, liver, stomach, etc., and wrench it clear of the body. Another man tackles the fish next and completes the gutting process by getting down on his knees and groping inside the big fish to draw out the viscera of the lower abdomen. Then come the men who scrape the "sweetmeat" and blood from the spine and when the surgical operations are finished the interior of the halibut is washed out with buckets of salt water and well scrubbed with tough, birchwood brooms. It has got to be a thorough job, for to scamp the work and leave viscera or blood in the fish would spoil it as far as its food value is concerned. Nothing sours so quick as halibut, and as every pound of it is worth from four to eight cents, the fisherman takes good care that none are spoiled through slack dressing.

The average size of the halibut we caught upon these grounds were from 80 to 180 pounds. Some went as high as 300 pounds, but fish of this size are not sought after by the fishermen as they are generally overgrown and coarse fleshed. For market purposes, the small fish under 100 pounds in weight with a clear white underbody is the most desirable, though they are really not any better eating than the grey bellied halibut scaling from 100 to 200 pounds. Fish above that weight are liable to be coarse, logy halibut too lazy even to make a struggle when hauled into the dory.

The smaller halibut were the tough customers. A hundred pounder usually put up a fight; even though he had been wrestling with a hook in his belly for the greater part of the night. The halibut of medium size is a fighter from the word "go." When you are hauling on the trawl you can feel him struggling a good hundred fathoms down, and when you get him to the surface he spins around like a teetotum making the job of giving him his quietus with the "killer" an exceedingly difficult one. For a good two or three minutes there is spray and profanity punctuated by the dull thuds of the club on the halibut's snout and still duller thuds when the club misses and strikes the dory

Taking sights for latitude

gunnel. When pacified, he is gaffed in the eyes; the dory is canted until the gunnel is level with the water, and the big fish is hauled in. That doesn't always mean the end of him, for in a minute or two he wakes up again and with his tail banging the dory bottom and threatening to stave the floor out, he slithers from side to side inside the pen and causes the little 18 foot craft to perform some hair raising rolling. Woe betide any man who has neglected to lash his thwarts down then! A lively halibut will soon slat them over the side and there is some frantic work on the part of the dory-mates in rescuing the dislodged gear. Even with every-

Vessel on the grounds.

thing lashed down, a frisky fish will sometimes unship the pen boards which confine him to the middle of the dory, and sliding for'ard and aft with the pitching of the little boat in the seaway. he gets snarled up in the coils of trawl with his tail going like a threshing mill. On top of the bucking devil, the fisherman throws himself and after clubbing the halibut into quietness, he takes precautionary measures against future convulsions by lashing the brute's tail to the risings, and then bails the water out of the dory.

The extraordinary vitality possessed by sharks and that ilk is also a feature of the halibut. For hours after pulled from the water they will kick and struggle, and often when the blooders are trying to cut their gills out, it is necessary to club them in order to make them relax the opercles for the operation. The writer has watched them struggling quite vigorously after all the gills and viscera has been cleaned out of them, and halibut hearts will pulsate strongly for half an hour after being separated from the fish. The majority of the big halibut caught are female fish—the male fish, as a rule, seldom scaling over 70 pounds.

To make a cast back to the Log! Noon.—The barometer is down on 29.3—two tenths below fishing weather, and with a wind making up from the S.E. we are on a bad lee shore if it breezes up. The skipper had an idea that fish might be struck on the north shore of the Island and he decided to make use of the change in the weather by making a set under the lee of the land. Captain Fred Upshell, of Gloucester, once hauled 64 dory loads of halibut off Cape Observation and thinking we might make a good set there, we swung off up the north shore for the Cape—eighty miles N.W. from Heath Point. 7 p.m.—Cold, raining, sharp breeze from S.E. Vessel heading up coast. Passed Table Head. No lights, buoys, or aids to navigation on this side of the Island. The north shore of Anticosti runs in a succession of table lands, 300 to 400 feet above the sea level and dropping down to the water's edge in sheer cliffs of limestone. The only vegetation is rank grass and stunted coniferous trees—spruce, balsam, and fir.

Wednesday, May 21st.—Arrived off the only settlement on the north shore of Anticosti—Fox Bay. Here is situated a lobster factory and store operated by M. Henri Menier, and as we wanted to procure some salt, we laid the vessel to the wind about three miles offshore and sent in three dories. As we sailed into the little Bay, we passed by hundreds of seals disporting themselves upon the shallow limestone ledges. 9 a.m.—Procured 12 bags of salt from the Fox Bay store, and after a look around the few buildings in the settlement—operated in summer only—we piled into the dories and had an exciting race off to the vessel again under sail in fresh breeze. 11 a.m.—Clear, sunny. Rounding Heath Point. In Wreck Bay, a little to the north of the Point, the two boilers of a wrecked steamer are lying upon the beach. This part of the Island has been a veritable Ocean Graveyard—especially in the old sailing ship days. The number of Quebec timber ships lost in the Fall of the year on the south shore of Anticosti will never be known.

Baiting up halibut gear.

Tuesday, May 20th.—Made Cape Observation at 3 a.m. Raining, misty, and very cold. Swung in for the land and hoisted dories over to make the set. All hands praying for some fish and better luck. 4 a.m.—Vessel jogging to dories. Snow and ice visible in the clefts and gullies of the cliffs—a most desolate and forbidding coast. 3.30 p.m.—Dories all aboard after hauling the gear and profanity flying. One halibut only, but quite a "jag" of codfish. Some gear lost by sharks. Men report the ground full of great, logy mud sharks—some as long as the dory, and where sharks are found, halibut are scarce. These sharks get tangled up in the trawls and cut them all to pieces in their struggles to escape. They are huge, lazy brutes with no fight in them—mud rakers and gurry eaters. 4 p.m.—Wind coming away from N.W. making a lee shore on this side, so we swung off for the south shore again. Breeze squally. Very cold.

Noon.—Came to an anchor three miles offshore and to the west of the Light. While the gang were baiting the gear for the afternoon set, the skipper and I pulled ashore in the dory. Sea smooth but quite a heavy surf rolling in over the hard limestone bottom. A feature of the Anticosti coast is the clearness of the water—the bottom being distinctly visible at a depth of three or four fathoms. While fishing in the shoal water, the men can watch the halibut taking the bait, and the characteristics of the fish can be easily determined. Halibut, unlike cod, haddock, hake, cusk, etc., do not snap at the bait on sight. Instead, they will deliberately wriggle up to it and lay alongside the hook for an indefinite period before biting. When he does take the bait and feels the barb in his interior, he does not exhaust himself in a frenzied flurry. No! with almost human cunning, he remains quiet until the trawl is being hauled, and then he cuts loose with his antics. In the depth of 100 fathom water, the

fish is pretty well played out by the time he has been dragged up from the bottom, but in shoal water he loses none of his energy when he comes to the dory gunnel. Then the fun commences, and many a good fisherman, exhausted with the struggle has been compelled to cut the snood and let him go. The old timers who have fished in shoal water know the art of playing the fish, and after hauling him up, they let him run. The men claim that he goes to the bottom with such force, head down, that he stuns himself, and it is an easy matter to handle him after that.

After a ramble along the beach, we came off to the vessel again; hoisted sail and got underway. Set the gear parallel with the shore in shoal water and returned to the anchorage after placing the watch buoy in position. Gang all praying for better luck.

Thursday, May 22nd.—Dories away to haul gear at 5.30 a.m. All aboard again at 8 a.m. with but five halibut and a few cod. Things looking

varieties of vegetables. The timber is of a larger class and not so stunted. Woods abound in deer and game of all kinds. Deer tracks all along the bog land at the edge of the cliffs. During the black fly season, many deer are found lying dead on the beach having fallen over the cliffs in trying to seek relief from the flies and mosquitoes.

A little way from the lighthouse is a small graveyard—one enclosure with a number of fine marble tombstones being the last resting places of the Pope family who settled on the point before Menier purchased the Island. Another grave with a good tombstone erected upon it is sacred to the memory of Captain Edgar Joyce and the seven men who were drowned in the wreck of the brigantine "Orient" lost upon the point in November, 1874. An oaken plank—evidently a portion of a ship's timbers—marks the grave of another shipwrecked crew, and the letters, carved with a jack knife, have rotted away. A rude anchor and one or two names are just discernable. A lonesome resting place

A good deck of halibut

decidedly blue. Evidently the fish are not inshore yet awhile. Swung off up the coast towards Sou'-west Point. Saw a halibut swimming on the surface of the water. Evidently looking to see where we were going in order to inform the rest of the family to keep clear of us.

Friday, May 23rd.—7.33 a.m.—Sou'west Point lighthouse abeam, distance 4 miles. Baited up and made a set about 3 miles ashore. Breezing up from S.W. Raining. Dropped watch buoy on the gear and swung off for shelter behind Sou'west Point. This is a fine natural harbor formed by an arm of solid limestone rock with deep water almost up to the beach. 2 p.m.—Went ashore and visited light keeper. Rocks around this part of the coast thickly imbedded with fossils—scallop shells, lobsters, and marine animals. The light keeper here has a finer place than Heath Point. He has a good garden and a meadow and can grow almost all

bleak and swept with the ocean sprays— but other than a canvas shroud and deep water, a fit place for a sailor's grave.

On the eastern side of the point, we beachcombing fishermen discovered a pebble shore thickly strewn with beautifully colored scallop shells. The whole shore was ablaze with them—red, purple, orange and pink, and for an hour we raked the shingle picking them up. I'm sure we must have carried hundreds aboard, and for the rest of the trip I spent my spare time making souvenirs out of them with pen and ink.

On returning to the schooner, we found company in the shape of the Canadian Government Ship "Tyrian" anchored for the night. She was repairing the cable which runs from Sou'west Point to the mainland of Gaspe, and that evening we exchanged visits and fraternised as sailormen do in outports and shelter harbors. Here's wishing the

genial Captain Dickson and his hospitable officers the best of good luck in their future traverses for the kindly welcome they gave to the tough, grimy looking character who begged newspapers and who takes this opportunity of thanking them for the cigars they forced into his hands.

Saturday, May 24th.—Empire Day in the British Empire. We got out the ensign, but as no halliards were rove, our patriotism had to be taken for granted. Got underway and picked up the trawls with 1,200 pounds of halibut and 1,500 cod. Language getting stronger with every set. Who's the Jonah? Noon.—Set tops'l and stays'l and stood up the coast to west'ard. 6 p.m.—Off St. Mary's Cliffs we met the schooner "Teaser" of Gloucester jogging to a watch buoy. The "Teaser" and her skipper, Peter Dunsky, is famous as the "high line" halibutter of the Atlantic. Where you find Skipper Dunsky, you'll find halibut, Fishermen say he knows the mind of the halibut and can tell where he is heading. We hailed him and the skipper, myself and two of the boys went aboard. Dunsky had 50,000 pouds of fresh halibut and 12,000 pounds of flitched or split and salted halibut aboard, and all caught to the west'ard in 40 fathom. We returned aboard feeling a little better at the news and all night we jogged in company.

Sunday, May 25th.—Fine, clear, sunny. Morning haze over the Anticosti hills. 5.30 a.m.—Baited up and set the gear in 40 fathoms off the cliffs. 10 a.m.—Hauled the gear after a few hours set and got a "skunk" haul. Eight dories with 6,400 baited hooks out and a catch of only one codfish to a dory! Language around deck sulphurous to say the least and most unsabbatical, while the remarks passed upon fishermen's veracity were almost poetical in their scope and choiceness of profane phraseology. No more shoal water for us! Swung the vessel offshore and made an afternoon set on the hundred fathom edge, and after setting the watch buoy, jogged to the light all night.

Monday, May 26th.—The dories came back this morning with 2,000 pounds of halibut and 5,000 of cod. Not much of a haul, so in order to change the luck, Jerry Boudrot—the cook and an old Gloucester fisherman—and I decided to make a set ourselves. We baited up, hoisted our dory over, and hove the gear—spitting on the end line for luck. At night we jogged to the watch buoy.

Tuesday, May 27th.—Breakfast at 3.30 a.m. After getting the rest of the gang over the side, Jerry and I got on to our own eight shot bultow and pulled in one 150 pound halibut and 13 large cod. We are not a "skunk" dory anyhow. Rest of dories came aboard about 7 a.m. with the best set so far—4,000 pounds of halibut and 2,000 pound of codfish. Jerry and I maintained that we changed the luck. Nobody makes any denials. Shifted further up coast and set the gear again in 100 fathoms off Cape Henry, Ellis Bay. Placed the watch buoy and swung in to Ellis Bay to procure more salt for the codfish. Strong breeze, Vessel logging 12 knots. 6 p.m.—Rounded up behind Ellis Bay breakwater and had our eyes opened to the importance of Mr. Menier's model town. The breakwater is a well built affair 3,300 feet long, equipped with railroad tracks and elevated chutes for loading pulp, wood and when we swung in, a large lake steamer was being loaded for Oswego, N.Y.

After getting the muslin stowed and the vessel securely moored, we had a chance to look around. Here, on an island we imagined was desolate and but sparsely inhabited, were locomotives hauling dump cars loaded with short lengths of pulpwood; gangs of men were stowing the blocks in the holds of the steamer, and all the harbor noises of a busy port predominated—engine whistles, escaping steam,

Clubbing a tough one

the roar of the wood sliding down the chutes, and the shouts of the stevedores.

Walking ashore along the long breakwater, the town opened itself to view. And a real model town at that ! Macadamized roads, electric light, squares, water works, and sewerage. All the buildings nicely painted and galvanized iron roofed—everything up-to-date and modern.

A first class pulp wood mill was running overtime and one could see the unbarked logs coming down the mill stream, entering the grabway at the far end of the plant, and being discharged from an overhead conveyor, barked and trimmed into 3 foot lengths, on to a mighty pile at the end of the wharf. Back of the mill was a machine shop fully equipped with lathes, punches, drills, and foundry gear. Four locomotives operate upon the fifteen or twenty miles of track which runs into the woods, and as there is no stream large enough for driving the timber down from the camps, the railroad is used for hauling out the cut.

Eight hundred men form the population of Ellis Bay and all are in the employ of Monsieur Henri Menier. The large store, where anything imaginable can be purchased, is run by Menier for the good of his citizens and not for profit. Goods can be purchased there at city prices. The bakery, hotel, boarding houses, telephone, railroads, post office, police and municipal departments—all first class institutions—are run by the French Croesus. A steamer—the "Savoy"—maintains a weekly service with Quebec and is operated by the proprietor of Anticosti. The very lighthouses which aid in the navigation of the port were brought from France and erected by Menier at his own expense.

It is hard to believe that this bustling town is private property and owned by one man, but here and there, posted upon the buildings, are enamelled plates with the caption "Reglements de l'ile d' anticosti propriete prive." The laws are signed by Henri Menier, proprietor. The laws are not harsh by any means, but all the residents of the town are expected to conform to them. The use or sale of intoxicants is prohibited. Guns are not allowed to be kept by any employees and the game must not be touched. Only the trappers in Menier's employ are allowed to kill any animals. Considering that the place is literally swarming with game—deer, black bear, marten, wild geese, duck, seals, etc.—it must be a hard check on the man with sporting instincts.

Though Mr. Menier has a palatial bungalow built on the Island at Ellis Bay, yet he does not live there. Two years ago he paid a visit to his little kingdom, but his authority is invested in the Governor he sends out from France.

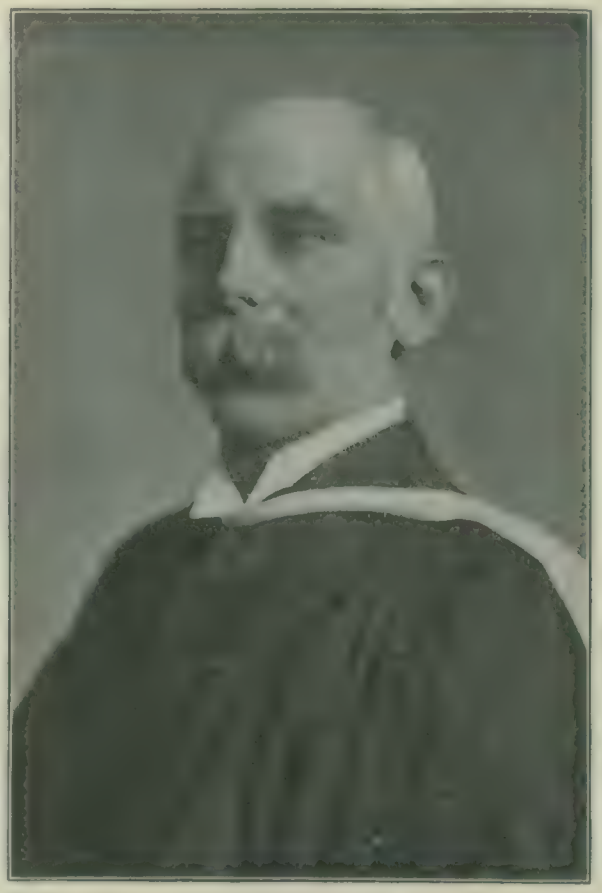
In the fall of the year, the majority of Anticostians return to their homes on the mainland, and the two or three hundred who remain to look after the buildings; cut out pulp timber and trap furs, are shut in for the winter by the Gulf ice which effectually deters navigation of any kind for at least three months.

(TO BE CONTINUED.)

Who's Who in the Fishing World

One of the best known men in the Canadian fishing world today, and at the same time, one of the greatest authorities upon this vast branch of the Dominion's natural resources, is Professor Edward E. Prince, L.L.D., D.Sc., F.R.S.C., Dominion Commissioner of Fisheries, Ottawa.

The Professor is a native of Scotland—a country which has done a great deal for Canada in being the birth-place of so many of the Dominion's leading men—and the record of his successful work in connection with the fisheries of Europe was the means of his being chosen by Sir John Thompson's Government, twenty-one years ago, to fill the position of chief fisheries adviser to the Dominion. Under personal directions from Sir Hibbert Tupper, then Minister of Marine and Fisheries, Professor



Prince made an elaborate survey of the sea and fresh water fisheries of the Maritime Provinces. In 1893, he accompanied Dr. Wakeham as advisor on technical fishery matters during the Boundary Waters of Canada Investigation, and the two years following, he investigated the salmon and deep sea fisheries of British Columbia. From then on, the Professor has made investigations and surveys of almost every river, lake, and territorial water within the Dominion or its jurisdiction, and his reports have been accepted as the standard records of Canada's Fishery Resources.

Aware of the vast practical knowledge gained by him in these investigations and of his ability as a scientist, Professor Prince has been chosen as

chairman of commissions and boards too numerous to mention at length, but among them may be enumerated the B.C. Salmon Commissions in 1901 and 1906; Georgian Bay Commission, 1908; Manitoba Commission, 1910-11; Alberta and Saskatchewan Fishery Commissions, 1911-12, and the Lobster and Shell-fish Commissions of 1908 and 1912.

Canada, with its huge fishing areas; it variety of species and abundance of fish in all its waters, has proved an ideal field for a man of the Professor's ability and attainments, and the vast scope of fishery knowledge which he has gained in twenty years investigating and biological work, has endowed him with a mantle of authority seldom accorded to men devoting their lives to a study of the fisheries. His ability in this particular scientific branch has been recognized in many ways. He was chosen in Washington and in Rome, Italy, as Vice-Prisedent of the great International Fishery Congresses held in those cities recently, and his address upon Canada's Fisheries delivered before the Congress and the King and Queen of Italy, was published in the January issue of the CANADIAN FISHERMAN.

As a member of the International Fishery Council of France; Canada's representative on the International Commission under the Fishery Treaty with the United States, 1908; Doctor of Laws, St. Andrew's University, Scotland; Doctor of Science, Acadia University, Nova Scotia; Fellow of the Royal Society of Canada, the British Science Guild, and American Shell-fish Association, and Scientific Expert to the Fisheries Advisory Board, Professor Prince is a Canadian signally honored, but justly so for the work he has done in developing and furthering the prosperity of Canada's fishing industries.

THE FISH OIL AND FERTILIZER INDUSTRY.

Fish refuse has proved an important source for fertilizing purposes, and the necessity of preparing it in commercial form has led to the development of the fish-scrap industry.

There are at present about 40 factories on the Atlantic coast, whose main output is fish-scrap and fish oil manufactured from the menhaden. These are found all the way from Maine to Florida. The business reached its high water mark as long ago as 1884, and the profits since have never been so great, owing to the reduced price of oil and scrap resulting from the competition of other products. The annual output in oil and scrap has not varied greatly from 70,000 tons of scrap and 35,000 barrels of oil during the past 30 years.

The great success which fish-scrap has met with as a fertilizer is due to in part the fact that besides containing nitrogen it furnishes organic matter to the soil which inorganic fertilizers do not do. Ammonium sulphate, an inorganic substance, a byproduct of coke ovens, supplies almost 50 per cent. of the nitrogen used as fertilizer in this country.

The menhaden has a variety of names. In science it is called Brevoortia tyrannus, but popularly in Maine it is called pogy and sometimes menhaden, which is also true in Massachusetts, where it is also occasionally called hardhead. In Rhode Island it is known as menhaden and in Connecticut as bony fish and white fish. In New York and New Jersey it is called mossbunker, while southward it goes by the name alewife and old wife and bug fish.

The menhaden is not generally considered edible because it is "too bony" or "too oily." However, the menhaden when freshly caught and properly cooked is good to eat, although not so choice as certain other fish easily obtained. As the cost of food increases and sea fish are used for economy's sake to replace more expensive meats, there undoubtedly will be an increase in the use of the menhaden for food. Menhaden have actually been prepared as are sardines, and have been declared a complete success when so used. A meat extract has also been made from this fish, equal in nutritive value to that of beef. While this food has been known for many years, the process of extraction has failed to develop on a commercial scale.

The waste from such fish as are not generally eaten, forms a possible additional source of fish-scrap. In the dressing of fish the waste represents an average of 25 per cent. of the "round" weight of the fish. The yearly catch of food fish in the Atlantic and Gulf fisheries is about 700,000,000 pounds; 25 per cent. of this represents refuse suitable for the preparation of fertilizer. A considerable portion of this it is possible to use economically, for the fisheries are scattered the whole length of the coast and many fish are shipped to market undressed, and much fresh fish that is dressed is prepared on shipboard and the waste thrown into the sea.

Most of the refuse of Newfoundland cod is thrown away as fast as produced. An investigation has shown that 150,000 tons of refuse are produced annually on the Newfoundland shores, which would be equivalent to over 20,000 tons of dry scrap. As this is produced at a time when all available labor is engaged in dressing the cod, the problem of saving this refuse offers scant hope of solution.

The dogfish furnishes another source of fish-scrap for fertilizer; and horseshoe crabs are also reported to have been used in certain localities. The shells of crabs and lobsters have been found to be admirable as "fillers" for finished fertilizers. They contain a large amount of lime of high agricultural value, as well as a certain per cent. of nitrogen. At one fertilizer mixing plant, on Chesapeake Bay, over 250 tons of ground crab shells are used annually.

Formerly menhaden oil was used principally as an illuminant and in currying leather. In addition it has long been used as a paint vehicle, as a lubricant, and as a soap-making grease. Large quantities now are used in the paint manufacturing industry and in tempering steel.

Certain paint and oil specialists regard menhaden oil as the best of the fish oils. Paint made from it is especially suited for painting iron work, such as boiler fronts, and smoke stacks. It also holds up better in a moist climate, such as that existing near the sea shore. Its use is specially recommended for replacing linseed oil in the manufacture of patent leather and similar products, and printing ink. The patent leather resulting is more flexible and less liable to crack, though it possesses a somewhat less glossy surface.

The high prices obtained in the early days of the industry led to its rapid development and a consequent overproduction in oil. Crude northern menhaden oil in the New York market in 1865 brought from 80c. to $1.40 per gallon. During recent years the oil varies from about 20c. to 30c. per gallon.

Possibilities of the Herring and Mackerel Fisheries in Canada

By C. H. WHITMAN.

It may interest the readers of the "Canadian Fisherman" to have some facts concerning the possibilities of development in the herring and mackerel business on the Atlantic Seaboard of Canada. I am not very familiar with conditions on the Pacific coast.

With some important exceptions, these fish are now caught by means of nets set near the shore or in bays and estuaries along the coast or in traps placed close to the shore and the business so conducted is a very uncertain one and seldom very profitable—often unprofitable.

These fish are migratory, coming from the south in the Spring and returning south in the Fall—a river of fish passing along the coast and only occasionally coming near to the shore or finding their ways into the bays and estuaries—hence the uncertainty of net and trap fishing as at present conducted.

It seems almost unnecessary to point out that if we want fish we must go where they are, and yet it is obviously necessary, in view of present methods that this fact is emphasized. The fishermen of Great Britain took this fact to heart earlier than we did, (we are only now waking up to it) and the result is that whereas they have an immense and growing industry, ours is a small, languishing and unprofitable industry.

The British fisherman is wiser than we are. He began where we are now, mooring his nets along the coast, but years ago, I am not sure just when, he discovered a more excellent way. He made up his mind that, as I have stated, if he wanted fish he must go where they are, and adopted the drift net fishing. He saw that the herring and mackerel were migratory and only occasionally touched the shores and bays. He went out to them twenty, thirty, forty, fifty miles from land in the small sailing craft that at that time were the only ones available, often with his life in his hand, and stringing his nets out astern across the stream of migrating fish, and drifting with them over night discovered that he had found a gold mine and he was not slow to exploit it. As the years went by, the means increased, he bought and built larger and safer vessels that enabled him to go farther afield. One difficulty presented itself. He often found it difficult, owing to moderate weather or head winds, to get back to port and land his fish the day they were caught, an essential thing, and be on the ground before night for another set. Not to be beaten, some one more courageous and enterprising than the rest, put a small steamer into the business and the problem was solved. Calm days and head winds no longer had any terror for him. He was master of the situation. Everybody prophesied failure. It would not pay. The expense of running his steamer would eat up all his profits. The rougher element among fishermen was ready to sink his little steamer or blow her up with dynamite, but he held on his way and came out on top. It was discovered that he was often doubling his competitors in catch and profit and the non-progressive, stick-in-the-mud fishermen had to admit that they were beaten. Now the steam drifter is everywhere with her two or three miles of nets and the sailing craft is not in yet, though many still employed. In 1913, the ports of Yarmouth and Lowestoft had about 1700. These 1,700 boats, took from the sea last year about 1,250,000 crans of herring. The "Cran" is supposed to count a thousand herring, so those two ports took in about one billion, two hundred and fifty million herring. Was not that a grand harvest of the sea? And that was only a fraction of the catch for the British Islands. The herring catch in 1913 from January to November 30th, for England and Wales, was 7,106,668 cwt., or (allowing 3½ cwt. to one cran) 2,030,476 crans, valued at about 11,000,000 dollars, as compared with 5,345,587 cwts. in 1912, valued at about 8,000,000 dollars. The catch in Scotland (in which Northumberland is included for statistical purposes by the fishery board) was 1,382,308 crans, which may be valued at 22 shillings per cran, making a total value of about 7,500,000 dollars. The total for England, Wales and Scotland for the first eleven months in 1913 is 3,412,784 crans, the value of which at first landing is about 18,500,000 dollars. The figures for Ireland are not available.

Now is not that a fine showing? Compared with that our little tu'penny ha'penny catch of herrings is very small: and yet, we need not despair. We have the men, as good men as ever sailed the sea, and we have the fish probably in as great abundance as on the coast of Great Britain. Give us the equipment and the easily acquired experience and we could produce similar results. Now that we have the United States market open to us, free of duty, we need not fear overloading it for years to come, and we may hope that the time is coming when Canadian Kippers and Bloaters and Canadian Scotch-cured Herrings will have an unrivalled reputation in the markets of that country. Let it be noted that Scotch Herrings, new large fulls, Shetland, were quoted in New York last month at $14.50 per barrel and $7.50 to $9.00 per half barrel; new matjes, large Lerwick, $7.75 to $9.25 per half barrel; Castlebays, new large Matjes $9.50 per half barrel. We have as good herrings as the best that Scotland can produce, but because of our slip-shod way of putting them up, we are often obliged to take a quarter of the price of good Scotch-cured. If our catch was a large one, the difference in prices would be heart-breaking.

I have no exact figures about mackerel, but what I have said about herrings as to method of capture will apply equally to the mackerel fishery.

BAY CHALEUR SMELT FISHING.

While the catch of smelts has not been large the price has compensated for the storage. Seven cents per pound is being paid for smelts. It is estimated that $1,000 per day is being paid out between Dalhousie and Dalhousie Junction in this business.

Effect of the Completion of the Grand Trunk Pacific Railway upon the Fisheries of British Columbia and the North Western Coasts of North America.

For some time past, the hopes of those interested in the expansion of trade on the Pacific coast, have been centred upon the completion of the Panama Canal. That this mighty ditch will benefit the cities of the Californian and Oregon slopes as well as those of Puget Sound, is a matter beyond question. The city of Seattle will make a large bid for the trade that is expected to flow, owing to her new $10,000,000 terminals. On the Canadian side both Victoria and Vancouver are also busy with their dock schemes. But whether the Panama Canal will affect the Fishing Industry as much as other trades, is a difficult question to decide.

But away up on the coast of British Columbia is a new city with ample cause for the abundant faith she has in her future. It is not for me to enlarge upon what Prince Rupert has done or what she is going to do. My object is to show that the new Grand Trunk Pacific Railway will have a very great deal to do with the future development of the Fishing Industry of Canada, and especially of Western Canada.

At present Prince Rupert is in the position of an athlete who has after long training, got into condition for a big contest On the completion of the Grand Trunk Pacific, she will show whether her faith in herself has beeen justified. Except for a few hundred miles and the Quebec bridge, the tracks are complete from the coast ot New Brunswick.

A glance at the map of the territory covered by the Grand Trunk Pacific will show a series of new towns and cities and newly opened up districts, where at present fresh fish in any form from the ocean, is a past memory. Looking at the terminus of this road, one sees that the fishermen are in direct touch with all sorts of new markets, as well as with the present established ones. They realise that the long trip to Vancouver or Seattle to dispose of their catches, will soon be a thing of the past. They count the days till they can ship without waiting and wasting two days to get to the markets.

That those interested in the fisheries of the Northern Pacific realize the future benefits to accrue is shown by the fact that both at Prince Rupert and also at the American centres of Alaska, such as Ketchikan, Wrangle and Juneau, are already erected and being built plants for taking care of the shipment of fish over the Grand Trunk Pacific. Certain of us are also bewailing the fact that we lost to America that valuable strip of land between Skagway and the Portland Canal.

Eany of the large fishing companies at Puget Sound are busy on new and up-to-date cold storage at Ketchikan, and of the larger Vancouver concerns, more than one has already a plant at Prince Rupert Taking into consideration the unique geographical situation of the Pacific terminus of the Grand Trunk Pacific, one soon realizes the great saving in the cost of operation that will follow. Prince Rupert is very close to the many banks that lie around the Queen Charlotte Islands, where large fishing stations are already operating. She is within a very few miles of the Alaskan Boundary, at the edge of which lies Ketchikan; she is at least two days nearer the haunts of the Halibut than Vancouver; and further still she can give the fishermen who land their catches on her wharves, unlimited supplies of bait and ice.

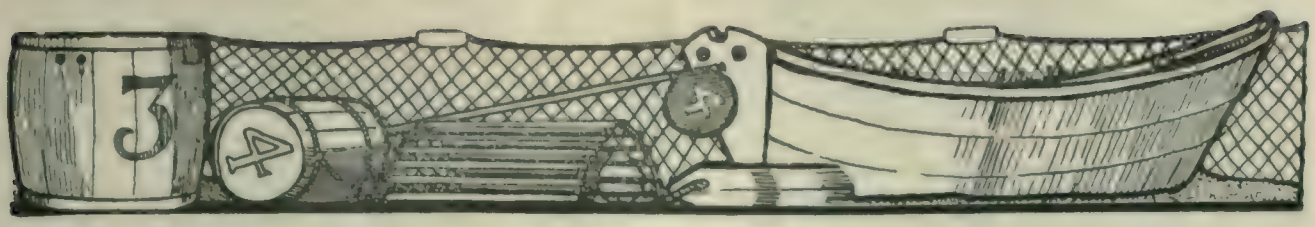
It therefore is a foregone conclusion that a considerable portion of the fish at present shipped from the Puget Sound points, will go over this new line. By it, fish can be delivered to the Middle West cities, to Toronto, and even far off New York, at least two days quicker than is at present possible. The two days steaming to the present shipping points will be saved, outside of the question of better grades that are claimed. It therefore stands to reason that this railway will permit of fresher and more fish being shipped.

The Grand Trunk Pacific Railway will touch directly at points now most difficult to ship fresh fish to. This cannot but tend to increase the sales of all fish. Many points along the lines of this railway want fish and find great difficulty to get it. Many farmers want ocean fish other than the salted or pickled goods. With this railroads terminus practically on the fishing grounds, all on the line and intersecting points, will be able to get, at most reasonable prices, food that now costs them double for less nourishment. This will tend to vary the monotony of the tables of those on whom we depend for our wheat. They will realize with us that variety is the spice of life.

Points touched by the present carriers will also be catered to by this new line, but serious competition is not anticipated. The fast increasing car shipments will only tend to make the present carriers give a service that will permit of equal benefits as those the Grand Trunk Pacific will offer. The main bulk of the business will not by any means go over the new line, as a great part of the salmon business is better handled from the Sound ports. What the new line will do for the fishing industry of Canada will be to give the whole trade an impetus, and our brothers of the Prairies, an abundant supply of fresh food fishes.

Prince Rupert also looks for the bulk of the Mild Cured Salmon trade, as this class of goods has to have quick handling. The Northern canneries will also ship through her.

Whether the promised new farming districts through which this new line will run, will materialize, is a matter for the future to show. But all, in any way connected with the fisheries of the Northern Pacific, realize that the Grand Trunk Pacific is a big factor in the future of the business. We can look upon it as an all round benefit both to shipper and consumer, whether on the Pacific or on the Atlantic Oceans.



THE ATLANTIC FISHERIES

CHATHAM, N.B.

(From our Special Correspondent.)

The smelt fishing this month has been much smaller than an average one. The fish are running very small in size, but the fishermen are getting remunerative prices for their fish. Smelts are bringing good prices on the American Market, which is the market that takes most of them.

Prospects for the Tom Cod Fishery are fair, the Tom Cods being exported chiefly to the Province of Quebec. Smelts and Tom Cods are the only two kinds of fish that are caught here at this season of the year.

The prospects are that the mackerel fishing fleet will be enlarged by the addition of several new boats.

ST. JOHN, N.B.

(From our Special Correspondent.)

Most of the dealers here confine their activities to the local market, except in the way of handling some salt fish for outside points. It does not take a great quantity of fish to stock the retail trade, and the dealers who buy fish for curing purposes do not handle a large quantity at a time. The consequence is that the fishermen are not always keen to bring their catches here, and there is little tendency to expansion of the business. Wholesalers have light stocks of salt fish at present, and the curers say it is much easier to sell their products than to get supplies.

St. John would seem to be a good point from whence to develop a fresh fish trade with Montreal and interior cities. But very little has been done in this direction. There are no large concerns here such as are found in Nova Scotia, and no off-shore fishing vessels owned and operated from here. Organization is lacking. Agents of Halifax Companies buying in Charlotte and St. John counties take deliveries at St. John, and ship by rail to Halifax, from where the fish is shipped to Montreal, Toronto, Boston or New York. Nova Scotia vessels collect fish along the coast of Charlotte and St. John counties, take them over to Digby and Yarmouth, whence they are shipped through St. John to upper Canadian markets. Much of this business could be handled at St. John, and no doubt will be in the future, if not by local concerns, then by Nova Scotia companies establishing permanent agencies here. With a company with considerable resources giving its attention to supplying fresh fish to the upper Canadian markets, offering a steady and increasing market here, the fishermen of Charlotte county and Grand Manan would be encouraged to exploit the fisheries of the Bay on a much larger scale than they have done in the past. Now their great trouble is that as soon as a large catch is made prices tumble. A member of the Charlotte County Weir Fishermen and Weir Owners Union remarked the other day that the fishermen were rather conservative in their methods, but that this was to be expected in view of the comparative lack of organization of facilities for reaching the larger markets for fresh fish of all varieties. Most attention as been given to the sardine and herring fisheries, and when these are dull the fishermen are slow to try other lines, except catching lobsters, for which there is a good market in Eastport and Boston.

The harbor fisheries of St. John which were formerly of considerable importance are declining in value every year. The auction sales of the fishing lots in the harbor and Courtenay Bay used for weir fishing for the present year only totalled $1,908.85. On some lots the bids were $300 less than last year. The city's revenues from the lease of fishing lots in recent years have been as follows: 1910, $5,180; 1911,$5,204; 1912,$3,175; 1913, $3,837; 1914,$1,908.

NEW BRUNSWICK NOTES.

(From our Special Correspondent.)

The lobster fishing on the shores of Charlotte and St. John County this season has been good, and the men have received good prices for their catch. The fishery officers have been active, and there have been few violations of the law. The lobsters have been of good size, A large proportion of the catch has gone to the States. On Grand Manan recently the fishermen were getting 30 cents a piece for large lobsters.

Although the sardine fishery on the shore of Charlotte and St. John county and among the Islands of Passamaquoddy Bay was a failure, last year some of the weirmen on Grand Manan did well. One weir there stocked $40,000. At the opening of the season the canneries paid $6 a hogshead, at the close some of them were paying $30.

The Provincial Governments efforts to encourage the cultivation of oysters on barren bottoms off the shores of New Brunswick are meeting with some success. Although the act was only adopted last year two companies have taken leases of barren areas. The Canada Oyster Company which has its headquarters in Toronto has been granted a lease of several thousands of acres in Bay Verte. Under the terms of the lease the company binds itself to spend $7,000 a year for a period of seven years, and to bring into cultivation at least one hundred acres a year during the same time. After 1920 the Provincial Government will take a royalty of 25 cents a barrel on the oysters sold; the minimum royalty will be $5,000 a year. It is said that

if the company carries out its plans it will not be long before it is producing more oysters than are now caught in the whole of Canada.

The Shemoque Oyster Co., Limited, another concern organized under the act, took a lease of an area of barren bottoms off the coast of the County of Westmoreland and planted about 100 acres with oysters last fall. This company is capitalized at $90,000. Richard O'Leary, of Richibucto, is the president; William Humphrey, of Moncton, vice-president; Matthew Lodge, of Moncton, secretary and manager; M. G. Siddall, treasurer. Other directors are O. M. Melanson, M.L.A., of Shediac, and Patrick G. Mahoney, of Moncton.

Shad fishing in this district was rather dull last year. The Dominion Fisheries Department has established a shad hatchery near Hampton, at the head of Kennebecassis Bay. There was difficulty getting eggs, but those procured appear to have hatched out very well. Better arrangements will be made this year for getting a supply of eggs.

The salmon hatchery built by the government at Little River, near St. John, will be ready for operations this year. It has a modern equipment, and will be adapted to hatching trout as well as salmon. For some years the government has maintained a retaining pond at St. John, where salmon have been impounded and stripped of their eggs. These eggs had to be taken to the hatchery at Grand Falls on the St. John River or to the Miramichi hatchery.

At Grand Manan and among the islands some attention is being given to seal fishing this winter. Adrian Ingersoll and W. A. Graham have had some success in this line.

Some of the business men of St. Andrews and St. Stephens are considering the formation of a company to engage in fishing, and give special attention to the matter of supplying the markets of Montreal with fresh fish. Their idea is to establish a cold storage plant in connection with their business. St. Andrews would no doubt be a good location. It has rail communication with Montreal and is contiguous to fishing grounds capable of considerable development. With a large cold storage plant the catching of herring could be conducted on an extensive scale and an abundant bait supply assured for local fishing as well as for sale to fishing vessels to other places. All along the American coast last year fishing operations were handicapped by the lack of bait, and $5 and $6 were, it is said, freely paid for a barrel of herring. Immense schools of herring strike in around Grand Manan and the shores of Charlotte county, and a cold storage plant in the vicinity would be able to do considerable business in storing them for bait.

PRINCE EDWARD ISLAND.

(From our Special Correspondent.)

Winter fishing in Prince Edward Island is confined exclusively to smelts and eels, sea-fishing being impracticable as the Island is surrounded by ice, usually from the first of January until April.

The present winter, owing to extreme mildness up to the first week in January, has been unfavorable for smelt fishing, no ice having formed on the rivers. Small catches were, however, made in December, and several considerable shipments were made by express to the United States markets.

Early in January the fishermen got to work in earnest and up to the twenty-fourth some six or seven car-loads were forwarded to New York and Boston, the total shipment being estimated at about 200,000 pounds.

Smelts are shipped in three grades, namely, Extras, No. 1 and No. 2, the grades being determined by size, style of packing also being considered. In conversation with a buyer for a New York house, who operates in New Brunswick and Prince Edward Island, the writer learns that a larger proportion of the best grades are found in Prince Edward Island than elsewhere in the Maritime Privinces. A shipment of Extras, selected from a few days' fishing at Grand River, a tributary of Richmond Bay—the home of the famous Malpeque Oysters—was made the other day; they weighed three to a pound and are said to be one of the finest lots of smelts ever received in the New York market.

Practically all the smelts shipped from Prince Edward Island are Extras and No. 1, the smaller sizes, and indeed considerable quantities of the larger, being absorbed by the local demand for fox food. When it is remembered that there are now over two hundred fox ranches in the province with a population of about three thousand foxes, and the number rapidly increasing. it will be seen that the local market promises shortly to be no mean rival to that of the United States.

Smelt fishing is now only really begun and with a favorable season catch promises to be at least equal to that of former years.

Eel fishing has not yet commenced this season, the fishermen confining their attention to the more lucrative smelt fishing.

Prices for smelts at this writing, in the United States markets, are as follows: Extras, per pound, 20c., No. 1, 12 to 14c., No. 2, 5c.

The local buyers pay the fishermen, on an average, five cents per pound for the ungraded fish. These are then graded, frozen and packed into 25-lb. boxes, when they are shipped either in small lots by express or in refrigerator cars from Pictou, whither they are shipped from Island ports by the winter steamers. One of the great difficulties heretofore in the handling of the smelt business was the fact that buyers had not been provided with the proper cold storage. As a result large quantities of fish have been spoiled in transit and on arrival had to be destroyed. Many serious losses were thus incurred by small dealers and as a result a number of them abandoned the business. This difficulty has been partially overcome by the establishment of several small cold storage plants at the principal centres, most of the large dealers now having cold storage plants of their own.

What is really needed is a central market with full cold storage equipment capable of caring for the whole fresh fish output of the province and in a position to ship it properly frozen in car-load lots. It is rumored that such an undertaking is now in contemplation by a United States firm. If it materializes it will be a great boon to the fresh fish business of the province. It will be especially valuable when the car ferry is completed and the Island Railway becomes really a part of the continental system. It will then be possible to load a refrigerator car at any point on the P. E. Island Railway and forward it to its destination anywhere on the continent without breaking bulk.

YARMOUTH, N.S.

(From our Special Correspondent.)

The Christmas holdiays have intervened since my last writing and in consequence there has not been quite so much doing in fish circles. Several of the schooners were laid up for a week or so while their crews went home, although a few kept on fishing. Then, too, this has been a period of high winds, perhaps not so much in the latter part of December as during the early part of January. Very often the vessels are in port four or five days at a time, and when they do get out they are lucky if they can make two sets before running back to harbor. But the weather has not only interfered with the schooners—it has, to a large extent, hampered the movements of the lobstermen. But nevertheless the lobster fishers have had a remarkably good season. Their shipments to Boston so far this season have been 3,953 crates, 1,158 in excess of those shipped during the same period last year, and in fact many of the fishermen, even if they do not take another lobster, have already put in a good season's work. The heavy gale which was responsible for the loss of the steamer Cobequid certainly played havoc with the lobster gear along the coast, particularly between Tusket Islands and the St. Mary's Bay, but in consequence of the good fishing so far the fishermen are not feeling the loss so severely as they might. A good many lost all the gear they had out and will not put new down before the spring fishing opens in March. Lobsters have been selling at a good price too, averaging about $28 per crate for large, and $21 for mediums.

During this month and next there are not so many vessels engaged in market fishing as during the other ten months of the year. Risky at all times the fishing business is doubly so just now. But those who have the hardihood to stick to it make greater profits owing to the higher prices which prevail. Frequently during the last few weeks the price of haddock has reached 4½c. and it has averaged about 4¼c.

The Consumers' Fish and Cold Storage Company are handling about all the catch at present and reaching out for wider markets. They have had a branch in Lockeport for some weeks and on January 19, their manager, Mr. George R. Earl, went to Shelburne to open another. From the first of November to January 17, about a million pounds of fresh fish had passed through their hands not bad for a new company in a new territory. This company held its first annual meeting on the 17th inst. at which the following directors were elected: President, E. E. Prior, of the P. H. Prior Company, Boston; secretary, Arthur L. Parker, of the Arnold & Windsor Company, Boston; Treasurer, George M. Eagles, of the G. M. Eagles Company, Boston; Manager, George R. Earl, Yarmouth; H. F. Phillips, of the B. F. Phillips Company, Boston; Morris P. Shaw, of the E. A. Rich Company, Boston; Elmer P. Randlett, of the F. E. Harding Company, Boston.

The Gateway Fish Company, the local concern now in process of formation also had a meeting of the provisional directors on the evening of the 15th. This was largely a matter of organization and although they are not yet ready to go into the fish business they decided to make a contract for a supply of ice consisting of from 1,400 to 1,500 tons. The public are taking hold of this company in good shape, though, and we expect to see them in operation soon.

Ice formed on the lakes on New Year's Day and by the middle of the month had reached a good thickness. Large quantities are bring "harvested"—probably five times as much as in any previous year—showing that the ice dealers, at least, are alive to the rapidly changing conditions.

The movement for a cold storage plant and artificial freezer is still making headway and we confidently expect to see it before long. The Consumers' Company are really behind this and from what we have seen of this company they are not disposed to let a thing drop when once they have taken hold of it.

The schooner Eddie James will probably be the first vessel owned here to go into the fishing business. She is being fitted for halibutting and will be ready when the season opens in March. Captain John Simms will likely have charge of her.

The fish exports from this port are growing every week. The customs returns show how they are increasing in quantity and value, until now it is not unusual for the Boston boat to leave a quantity of freight on the wharf here being unable to handle it. Representations have been made to the company and another boat has been promised to go on next month, thus doubling the number of trips per week. Since my last letter the exports have been as follows:

	Pounds
Live lobsters, crates	3,347
Fresh fish, cases	972
Halibut, cases	8
Cod oil, barrels	1
Smelts, boxes	272
Eels, barrels	33
Salt mackeral, barrels	175
Canned lobster, cases	167
Boneless cod, boxes	3,438
Finnan haddies, boxes	363
Dry salt fish, drums	2,140
Pickled fish, cases	216
Clams, barrels	408
Hake sounds, barrels	31
Alewives, boxes	110
Dulse, barrels	7
Glue stock, barrels	31
Fish waste, barrels	629
Salt herring, barrels	316
To Havana:—Dry salt fish, drums	210
To Hamburg:—Canned lobsters, cases	791
To London:—Canned lobsters, cases	475

During the same period following fares have been brought in and almost all of them were landed here:

Dec.	23	Dorothy G. Snow	28,000
"	23	Albert J. Lutz	12,000
"	24	Mertis H. Perry (Am.)	11,000
"	24	Ruth	5,000
"	24	Mildred Robinson (Am.)	18,000
"	24	Morning Star (Am.)	18,000
"	30	Mertis H. Perry (Am.)	5,000
Jan.	2	Morning Star (Am.)	25,000
"	2	Albert J. Lutz	10,000
"	6	Albert J. Lutz	5,000
"	6	Dorothy G. Snow	20,000

"	6	Morning Star (Am.)	32,000
"	6	Angie B. Watson (Am.)	9,000
"	8	Albert J. Lutz	10,000
"	8	Dorothy G. Snow	14,000
"	9	Dorothy G. Snow	4,000
"	9	Albert J. Lutz	4,000
"	9	Morning Star (Am.)	4,000
"	9	Angie B. Watson (Am.)	4,000
"	9	Loran B. Snow	4,000
"	16	Dorothy G. Snow	10,000
"	16	Albert J. Lutz	6,000
"	16	Loran B. Snow	8,000

DIGBY, N. S.

(From our special correspondent.)

Digby, Jan. 29th, 1914.—The fishing business at this port is progressing in the usual manner. The rough weather during the past month has destroyed a large number of lobsters trap, especially in St. Mary's Bay.

The imports during January were reported by the different firms as follows: Maritime Fish Corporation, 432,992 lbs of haddock; 53,220 lbs. of cod; 3,800 lbs, of cusk; 56,461 lbs. of hake; D. Sproule & Co., 55,508 lbs. of mixed fish; Joseph E. Snow, 1,420 lbs. of haddock, 350 lbs of hake.

CANSO, N. S.

(From our special correspondent.)

High line stocks has been the rule in the winter haddocking out of Canso and vicinity since the beginning of the fishing in December, and the present season is regarded as being one of the best in the history of the port. The weather at the beginning of the season was bad, but after Christmas things began to look brighter and with the New Year the fishermen reaped a good harvest. Between the 29th and 30th of December, some 300,000 pounds of fresh fish were landed on Canso wharves. Mr. Bert O'Hara is the high line gasoline boat fisherman with a stock of $90 clear for two days fishing.

The first week of January was a banner one—the crews of the various boats clearing from $25 to $100 per man for the week. The smoke houses have been working in full capacity with night and day shifts, and shipments of finnan haddies have been heavy. The landings for this week totalled around 800,000 pounds.

At the time of writing, January 31st, the season is closing. Good prices have prevailed and heavy shipments of fresh and smoked stock continue, but it will be some time yet before the reserve stock can be shipped out.

An idea of Canso's development in fishing will be gained from the following table of fish shipments by the Intercolonial Railway from Mulgrave since 1900:

Year	Tons Fish Shipped.	Value.
1900	1,450	$100,000
1901	1,900	133,000
1902	1,800	126,000
1903	1,600	1,120
1904	1,700	127,500
1905	2,201	116,070
1906	3,154	220,780
1907	3,156	220,920
1908	3,372	235,900
1909	2,371	191,170
1910	3,431	240,100
1911	4,110	308,250
1912	4,238	317,850
1913	5,314	398,550

The freight and express charges on the 1913 shipments amounted to $60,442,00—over $15,000 more than the year previous. Truly a great development. In addition to this, the Maritime Fish Co., North Atlantic Fisheries, Robinson Glue Co., Whitmans, and the Dogfish Reduction Works, and others shipped the following by steamer to Halifax:

	Value.
250 tons fish oil	$12,000
75 tons fish glue	9,000
350 tons fish fertilizer	12,250
1,100 tons fish	77,000

These figures are certainly encouraging and the indications are that 1914 will show a still greater development.

NEWFOUNDLAND.

Statement of dry Codfish exported from Newfoundland for the eleven months ended November 30th, 1913, and for the corresponding period in the perceding year:

Country of Destination	1913. Cwts.	1912. Cwts.
United Kingdom	6,128	8,347
Canada	74,690	106,085
B. W. Indies	91,484	71,077
Malta	600	1,606
Algeria	40	80
Argentine Republic	.....	3,811
Brazil	405,321	303,681
Colombia	588	.....
Costa Rica	139	36
Foreign West Indies	16,408	8,002
Egypt	.....	.....
Greece	40,560	23,357
Italy	116,922	134,636
Madeira	4,566	4,034
Panama	216	392
Portugal	170,985	179,288
Spain	117,251	88,017
United States	16,118	32,239
Gibraltar for orders	56,015	51,948
Pickled Codfish Exported	98,507	46,820

According to the Trade Review there has been more fresh fish than usual coming into the market this winter, but not enough to supply the demand. Boxed salt cod is being sold in considerable quantities, but there is no demand for the plain salt codfish. Whether the high price of meat is affecting the market or not, it is difficult to say, but there can be no doubt we are eating more fish at present than ever before. If we had the proper boat to prosecute a winter fishery off St. John's, there would be big money in the business.

The amount of dry codfish held in stock at St. John's at this season is the smallest in many years. As near as we can figure it, the entire stock held here will not exceed 200,000 quintals. The stock usually held varies from 300,000 to 400,000 quintals at the beginning of the year. The merchants can go slow in marketing their goods as five months must elapse before any new fish will be available.

The exports of codfish for the first three weeks of the new year, from January 1st, to 23rd, are as follows: Portugal, 3,192 qtls.; Spain, 628 qtls.; Italy, 2,716 qtls.; Brazils, 50,245 qtls.; Canada, 269 qtls.; England, 882 qtls.; Scotland, 641 qtls.; Other parts, 2,835 qtls.

The American schooners Georgie Campbell and Hiram Lowell, and Newfoundland schooner Francis Willard are icebound at Bay of Islands. All are loaded with frozen herring for the States. Up to the time of writing, January 21st, they have not been released, and unless a change takes place they are liable to remain fast until spring.

Newfoundland vessels owner and fishermen are being earnestly advised to make a bid for the fresh fish trade of the United States. Larger vessels to make the passage are advocated and fishermen are advised to study navigation. The Trade Review suggests that a bounty, similar to that of Canada, be granted vessel owners and fishermen to encourage the development of this business. The Government is considering the question of bait supply so that bait will be available to N. F. fishermen in the future. At the present time, most of the bait is sold to the Americans for use in their own fisheries.

LUNENBURG, N. S.

The following dividends were recently paid out to the owners of Lunenberg vessels.—Schr. Delawana, Capt. Benjamin Cook, $4,100; Revenue, Capt. Forman Mossman, $3,332; Schr. Nobility, Capt. Hiram Ritcey, $2,848; Schr. Falka, Capt. Charles Conrad, $2,188.

The Lunenburg schooners William I. Smith and Gladys B. Smith were the first Canadian vessels to land frozen herring in the United States from Nefoundland. Both vessels took advantage of the Free Tariff and landed their car goes in New York. Former ly all such cargoes were brought in by Gloucester vessels.

According to an interview published in a recent Halifax Herald, Mr. J. E. Wood, returning from a visit to Port Rico, states that Lunenburg supplies 95% of the dry codfish used on the island.

The Lunenburg schooners are noted for their fast passages to and from the West Indies. Recently the Lunenburg schooner Warren M. Colp made a record run across the Atlantic from Newfoundland to Torrevieja, Spain, in 11 days.

On the arrival of the Lunenberg vessel, hundreds visited her, and her consignees found it hard to believe that the little craft had made the trip in so short a time. On the return to Lunenburg the schooner met with nothing but adverse winds, and was 46 days coming. For 1250 miles it was a dead beat, during which time only one sail was sighted. The vessel had on board 128 tons salt.

The Lunenburg fleet at anchor in the harbor have all been on the slip and painted and overhauled. The skippers are now engaged picking up their gangs for the early spring trip. It is expected that the same number of vessels which composed last season's fleet will fit out for this year.

HALIFAX, N. S.

The prevailing prices for fish ex vessel are as follows:

	Per qtl.
Small dry cod	$6.50
Medium dry cod	6.50 to 6.75
Large shore cod	6.75 to 7.00
Bank cod	7.00
Haddock, dry, slack, salted	4.25 to 4.50
Cod oil (ex-vessel), per gal	.30
Pollock	4.25 to 4.50
Hake	4.00 to 4.25
Mackerel, large, per bbl	10.00
Mackerel, medium, per bbl	10.00
Fat herring, bbls	4.50
Fat herring, half bbls	2.50

SHELBURNE, N.S.

Messrs. Winslow McKay & Son have taken contracts for the building of two vessels. Both are for Digby and Riverport parties.

The Joseph McGill yard launched the fishing schooner "Cecil L. Shave" on January 16th. The schooner is of 101 tons register: semi-knockabout model, and is owned by Captain Thomas Shave of Burin, N. F. The keel has been laid for a fishing schooner of 100 tons for Captain Joseph E. Conrad of La Have, N. S.

At the annual meeting of the Roseway Fish Co., Shelburne, last week, a dividend of 4 per cent. was declared for the six months ended December 31st last, and 4 per cent. was set aside for depreciation. The Union Fish Co., Litt e Harbor, Shelburne, also declared a dividend of 5 per cent. for the past year.

Clark's Harbor and Lockeport will have a plentiful supply of ice for the fishing season. A large amount has been cut and stored during the recent cold snap.

At Clark's Harbor, lobstering thas been suspended for the winter. In spite of the rough weather which destroyed a lot of gear, the fishermen have done well. Prices have been high, running from 8 cents per pound for shorts, and 18 cents each for lobsters over 9 inches. At Lockeport, the lobstering has been good—1,875 cases having been shipped up to the end of the month.

The Lockeport fresh fishing fleet have been ringing in some big trips lately. On January 23rd, 142,000 pounds were landed for the day's fishing. Nearly all the fish are being sent to Boston market via Yarmouth. It is said that two more vessels will be added to the fleet fishing out of the port.

Two Clark's Harbor fishermen—William Smith and Colbourne Nickerson—were drowned during the early part of the month while hauling lobster pots. It is not known how the accident happened. Two other men—Arthur and Angus Smith—saw their power boat awash with Smith's body lashed to it. Both men left families.

Clutch Slipping.

Sudden racing of the engine often indicates that the clutch is out of engagement or slipping. A good remedy for slipping is to wash the friction surfaces of the bands thoroughly with gasoline. These bands should be kept entirely free from grease or oil.

THE PACIFIC FISHERIES

ATLANTIC DOGFISH AND ITS USES.

We noticed in the first issue of the CANADIAN FISHERMAN some remarks concerning the commercial value of the Dogfish—the bane of the Atlantic fisherman. In it, the value is placed at $14.00 to $15.00 per ton.

China and other Oriental countries is looking for fish of all grades and will take many thousand tons per year, provided the goods are cheap enough. The prolific Pacific herring, most of which is too small and insufficiently fat enough to be of other marketable value, is packed and shipped under a process known as dry salting. This process calls for very little preparation and handling. Basing the price of the Atlantic Dogfish as above, we think that it can be delivered in Shanghai for $17.50 per ton. The herring is packed in boxes of 475 lb. gross, 390 lb, net and 5 boxes to the ton measurement. To allow for shrinkage the herring ton is placed at 2,100 lbs.

The writer has had the opinion for several years that the Dogfish can be treated in this manner and sold to good advantage to the trade in China. Several influential Chinese exporters have also this opinion, with the result that the writer is open to receive correspondence and also samples to submit to his friends and buyers. Further, the roe of the Dog Fish, if cured as required certainly ought to be a big seller in the Oriental countries. This will have to be dried hard.

Whilst on this question, there have been several enquiries of late for the Roe, Entrails, Heads of all fish, irrespective of character. These are wanted both dry salted and pickled. Instead of dumping as now obtains, the entrails, heads and other so far unmarketable parts of the cod, haddock, etc., etc., to anyone who packs these required parts as per instructions, there offers a good field. The packing can be done as cheaply as possible, provided sufficient care is taken to make the Pickled fish packages tight enough. The old wine and spirit casks, and other packages of similar nature will be quite good enough for this purpose.

The writer will be only too pleased to give full particulars to anyone who will write to him for further information. The editor of the CANADIAN FISHERMAN will furnish the address. That this is an opportunity to grasp, and also one of the future developments of the Fishing Industry of Canada is undoubted. The experience of a all packers is that it is the by-products of their manufactures, that makes the money.

VANCOUVER FISH MARKETS.

Ruling Wholesale Prices.

FRESH FISH:	per lb.
Salmon—Spring	$ .12
White Spring	.06
Halibut	.09
Cod	5½–6
Smelts	.08
Herring	2½
Soles	.05
Flounders	.03
Whiting	.03
Oolachans	.06
Skate	.03
Perch	.07
Rock Cod	.04
Red Cod	.04
Sea Bass	.08
Black Cod	.08

FROZEN FISH:		
Salmon—Cohoes, dressed heads off, 7c.;	Round,	6½
Qualla, dressed heads off, 5c.;		
Steelhead—Salmon, dressed heads off, 10c.;	"	9½
Cod	per lb.	$.05
Halibut	per lb.	.6½
Smelts	per lb.	.05
Oolachans	per lb.	.05
Soles	per lb.	.05
Flounders	per lb.	.03
Perch	per lb.	.07
Herring	per lb.	.03
Whitefish		
Black Cod	per lb.	.08
Shad Roe	per pair	.20

SMOKED FISH:		
Salmon	per lb.	.10 .12
Halibut	per lb.	.12
Cod	per lb.	.08
Finnan Haddies	per lb.	.08
Kippers	per lb.	.06
Bloaters	per lb.	.06
Kippered Salmon	per lb.	.12

SHELL FISH:		
Crabs (deep sea)	per doz.	$1.00
Shrimps (local)	per lb.	.15
Clams	per lb.	.03
Olympia Oysters	per gal.	3.25
Eastern Oysters	per gal.	4.00

CANNED SALMON:

Sockeyes (Talls)	per case	$6.50
Sockeyes (Flats)	per case	7.00
Sockeyes (Flats, halves	per case	8.25
Cohoes (Talls)	per case	4.25
Cohoes (Halves)	per case	6.50
Pinks (Halves)	per case	2.75
Pinks (Halves)	per case	4.00

Market has every indication of holding stiff, and no lower prices are anticipated. Sockeyes are being shipped only to fill orders taken early, and no new enquiries can be taken care of. The carry over this season will be very small even on the cheaper grades.

GENERAL NOTES.

The weather on the Pacific has been just as unkind to the "toilers of the deep" on these shores as it has been to their brothers of the Atlantic. This does not apply to the Sound so much, as to the open sea. The former are able to get a supply sufficient for the trade. On the other hand the halibut fishers have not had much encouragement for their venturesome trips to the banks. Fresh stocks of deep sea fish are in consequence scarce, and shippers are now drawing on their supply of frozen goods. With the closeness of Lent, and consequently larger demands, this will mean higher prices all round.

Stocks of Frozen Salmon are not large, and many holders are waiting for the advance in prices. Halibut is also expected to jump somewhat, and Eastern dealers who have not already their full requirements are advised to place orders as soon as they can.

Visitors to the wholesale fish wharves of Vancouver are treated to sights that are not to be seen on the Atlantic coasts. Many of the more common of the Atlantic fish have their cousins in the Pacific waters, but in many cases the shape as well as the color of the fish is different. The Red cod for instance is a most gaudy looking affair. One sees also the larger species of squid, known otherwise as the "devil fish." This is almost transparent white, if we may coin such a term. The Chinese and Japanese fishermen and residents look upon this fish as a most lucious dish, and also many white people consider it a great delicacy. The waters of the Pacific abound in these repulsive looking fish, and a large trade in the future is anticipated with the Oriental markets. Only the long feelers stripped of the cuplike suckers are used. They are said to be excellent eating when salted down.

We on the Pacific have our troubles just the same as the Atlantic fishermen have with their dogfish. Only ours is the common or garden hair seal, or "bay beater" as it is termed East. Nets are broken and gear smashed by these animals, to such an extent that the Department of Marine and Fisheries now pays a bonus of $3.50 for evidence shown of each seal killed. As the usual market price of the seal is about $1.50, one would think that there is a business alone to be done in catching these depredators. But it is a case of "show me how." It is easy enough to shoot the seal, but getting it after it is shot is a different proposition. This animal sinks immediately after it is killed. Outside of nets there seems to be no way of getting the seal. Rumour has it that certain individuals are inventing a species of harpoon gun, but success along these lines looks pretty slim. We trust that this item will not encourage some of the old seal killers, who still speak about the year the "patch was struck N. N. E. of the Funks," to try their luck here.

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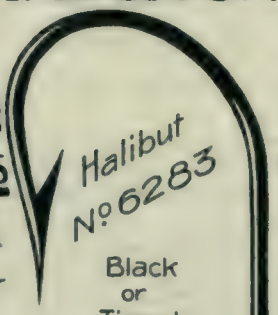

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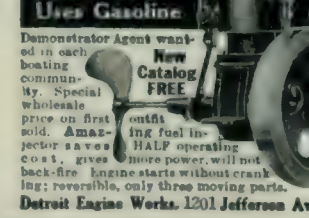

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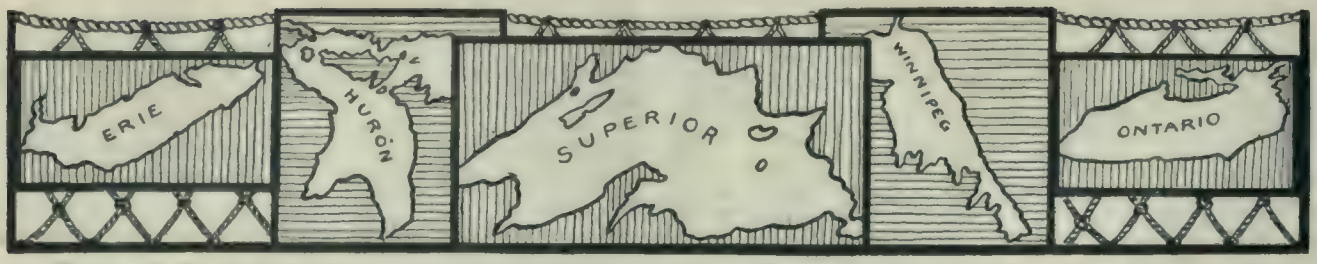

THE LAKE FISHERIES

GREAT LAKES FISHERIES.

(From our special correspondent.)

Unusual weather conditions prevailed this season for the Lake men who do winter fishing. Of course, it is out of the question to do much fishing if the ports get frozen early in the season and the men are unable to get in and out, but this year the weather was unusually mild and naturally the fishermen with nothing else of very great importance on their hands put in their nets for a few December lifts. Moreover, the market was so low on Fall-caught fish that there was a big opening and big prices for the men who could produce a few tons.

Some of the fishermen in Georgian Bay points produced fish right up until the first of the New Year with good success. The prices were high, higher than for many years post and the catches were fair.

On the other hand, the Herring fishing in Lake Superior during November amd December was not nearly so good as in past seasons. The amount of fish caught was much smaller and in addition to this the weather was such as to make it possible to freeze the fish and the majority of the catch had to be salted. The salted stock produces smaller margin on account of the extra labor, packages and shrinkages in the curing, and the result was not as good as it usually has been from the fishermen's standpoint. Probably 50% of previous seasons was about the correct statement of the catch.

The Ontario market for fish is in a peculiar state at the present writing in regard to Lake fish. Practically all the frozen Trout has been used up and supplies of frozen fish from the Western Lakes is very slow in arriving. The unusually mild weather is again the cause of the latter condition. Most of the fish there are produced at out-of-the-way points and have to be transported over the ice to the railway stations by teams. This year there was practically no ice until the New Year set in and the teams were idle. A great quantity of fish had been spoiled through the companies not being able to transport stock to shipping points and large quantities are being offered as No. 2 stock at the present time.

It is just possible that the Lent season will see a lot of these fish thrown on the market at low prices, but at this time it is impossible to say how many fish are at points far removed from communication.

The producers of rough fish are netting a small harvest this mild weather. Pike, eels, sunfish, and similar lines are being brought to the big centres and aided by unusual weather conditions for both operation and sales, are doing very well. The foreign element use these fish and pay high prices for fresh stock.

The Ontario market is paying high prices for Lake fish this year. With Trout practically off the market, Whitefish very scarce, Lake Erie Herrings nearly all sold to United States points and no great quantity of Lake Superior Herrings either pickled or frozen left, there is no incentive to get prices. Sea fish are selling at very moderate prices and is being sold in greater quantities.

INVESTIGATION OF LAKE FISH COMBINE.

A despatch from Ottawa states that the alleged fish trust which is controlling the output of the Ontario fisheries will be thoroughly investigated when the High Court of Living Commission visits Toronto. Fish dealers and packers from all over the Province will be summoned to give evidence as to the existence of the combine for the shipping of fish across to the States and the raising of prices.

Various suggestions have been made to combat the alleged trust, but the most notable is that of the Hon. W. J. Hanna who suggests that the Provincial Government might make a monopoly of the fisheries within its boundary waters and sell the product at cost in municipal markets. According to the Toronto Globe, this would make the Government the sole vendor of fish. With the view of organizing the service from the standpoint of efficiency only experienced or "legitimate" fishermen would be employed. Those who fish while the game is profitable, deplete a preserve and leave off when luck is poor, without regard to the restocking of the waters will have no part and will be forced to give up.

The Globe further states that the Lake Shore fishermen are now agitating to have the Government fix the price at which fish are to be sold.

All along the fishing ports on Lakes Erie, Huron and Superior, fish dealers who supply the local markets are complaining of American completion. The fish trust has practically control of the disposal of the catch, and while prices are moderately low in the summer season, in winter the fish are shipped to United States cities, and the price is boosted if purchases are to be made for the Canadian market. This is significant in the case of herring, which can be bought in summer for about three cents a pound. The demand in the United States for fresh water fishing enables a price of eight cents a pound to be had, and unless the Canadian dealers will meet that price, away go the fish to Chicago and other large distributing centres.

It is to overcome this condition that the dealers are urging the government to vest itself with power to regulate the price at which the fish are to be sold. The simplest plan would be to impose an export duty, unless a plan for creating a Governmental monopoly is adopted. The plan is being

vigorously but surreptitiously opposed by the fish trust, who depend largely upon the catch in Canadian waters to supply their depots in the United States. It is likely that the whole matter will be the subject of correspondence and arrangement with the Federal authorities, for as soon as the restriction is placed upon the operations of the trust, poaching will be a frequent occurrence and the fisheries protection service will have to be augmented.

For the interest of the Lake fishery, it is to be hoped that the Commision now sitting will find a satisfactory solution to this vexed problem.

WHITEFISH HATCHERIES AND FISHERY STATISTICS ON GREAT LAKES.

A correspondent writes:—"Canada has one whitefish hatchery for Lake Erie situated at Sandwich, on the Detroit River. Could you tell me through your magazine how many the United States have? Also how the Lake Erie compares with the other Great Lakes in the amount of fish taken."

It is true that at the present time we have but one hatchery for that lake. It is located at Sandwich. We have also a whitefish hatchery at Sarnia, but the output of it goes into Lake Huron and Lake Ontario. The United States have no hatchery on Lake Ontario.

The State of Pennsylvania has a hatchery at Erie City, and in Ohio there is one at Put-in-Bay, though our understanding is that it is owned and operated by the Federal Government. The Federal United States Government also has a hatchery in Detroit, the output of which finds its way into Lake Erie.

We have no statistics as to the catch of whitefish on the United States side of the Great Lakes, but the attached table gives the catches of the most important fish on the Canadian side during the year 1911. The Provincial Government administers the fisheries in the Province of Ontario, and the attached statistics are taken from its report.

	Whitefish lbs.	Trout lbs.	Herring lbs.	Pickerel lbs.
L. of the W's and R. River	761,487	81,585	....	402,701
Lake Superior	703,653	1,749,337	784,280	81,569
Lake Huron:				
N. Channel.	749,881	1,872,134	766,400	287,543
G'g'n Bay..	354,455	,385,748	466,748	86,528
Lake Proper	70,152	915,033	121,010	175,588
Lake Erie....	1,139,345	2,799	9,938,892	802,067
Lake Ontario.	585,728	384,567	950,694	98,019

The Japanese are great fish eaters. Look what they did to the Russians!

FISH

Fresh - Frozen - Smoked - Salted - Dried - Pickled

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Department of Marine and Fisheries

FISHERIES:

In addition to the full statistics of the Fisheries which are published yearly in the Annual Report, the Department issues monthly bulletins containing statistics of the sea fisheries and general information in regard thereto. Copies of these will be sent free to any applicant.

The value of the Fisheries of Canada is now about $34,000,000.00 annually.

The demand in the home markets for fresh and mildly cured fish, is expanding very rapidly. The Department pays one-third of the express charges on all shipments of such fish from the Atlantic Coast to points as far west as the eastern boundary of Manitoba, and from the Pacific Coast, as far east as this boundary. Over 1,000 tons more fish reached Montreal for use there and distribution to other points from the Atlantic Coast, under this arrangement last year than the year before. The growth has been equally satisfactory from the Pacific Coast to the Prairie Provinces.

Close Seasons for Fish in Force on December 1st, 1913

Kind of Fish:	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.
Bass (Achigan)	.....	.....	.....	1 April to 15 June.
Maskinonge	.....	.....	.....	15 April to 15 June.
Ounaniche	.....	.....	.....	1 Oct. to 30 Nov.
Oysters	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.
Quahaugs	Oct. 1 to May 10 July 1 to Aug 31.	Oct. 1 to May 10 and July 1 to Aug. 31.	Oct. 1 to May 10 and July 1 to Aug 31.	.....
Pickerel	.....	.....	.....	April 15 to May 15.
Salmon (netting)	Aug 15 to March 1.	Aug. 15 to March 1.	.....	Aug. 1 to April 30.
Salmon (angling)	eAug. 16 to Jan. 31.	Sept 16 to March 31.	.....	Sept. 16 to April 30.
Smelts	fApril 1 to July 1.	fMarch 1 to June 30.	fApril 1 to June 30.	.....
Sturgeon	.....	June 1 to July 1.....	.....	June 1 to July 1.
Speckled Trout	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to April 30
Salmon Trout	.....	.....	.....	Oct. 15 to Dec. 1.
Whitefish	.....	.....	.....	.....

Kind of Fish:	Ontario.	Manitoba.	Saskatchewan.	Alberta & British Columbia.
Bass (Achigan)	a15 April to 15 June.	.....	.....	.....
Maskinonge	15 April to 15 June.	.....	.....	.....
Ounaniche	.....	.....	.....	.....
Oysters	.....	.....	.....	.....
Quahaugs	.....	.....	.....	.....
Pickerel	cApril 15 to May 15.	April 15 to June 20.	dApril 1 to May 15.	dApril 1 to May 15.
Salmon (netting)	.....	.....	.....	.....
Salmon (angling)	.....	.....	.....	.....
Smelts	.....	.....	.....	See regulations.
Sturgeon	.....	gMay 15 to June 15.	gMay 15 to June 15.	gMay 15 to June 15.
Speckled Trout	Sept. 15 to April 30.	.....	.....	.....
Salmon Trout	hNov. 1 to Nov. 30.			
Whitefish	hNov. 1 to Nov. 30.	Sept. 15 to Nov. 19.	iSept. 15 to Dec. 15.	iSept 15 to Dec. 15.

a—Except in Lake Erie west of Pt. Pelee and around Pelee Island, where close season is May 25 to July 15.
b—Except on leased areas, where close season is from 1 July to 31 Aug.
c—No close season in St. Clair River and off Lambton County.
d—Except in waters north of or intersected by 54th parallel north lat. between eastern boundary of Saskatchewan, and 109th meridian and in waters intersected by or north of 55th parallel n. lat. west of this meridian to western boundary of Alberta, where there is no close season.
e—Except in Cape Breton Island, where close season is from Sept. 27 to May 31.
f—Bag-net fishing season Dec. 1 to Feb. 15; gill-net fishing season Oct. 15 to Feb. 15. Licenses required for bag-nets or gill-nets.
g—Sturgeon fishing prohibited until Jan. 1, 1916.
h—No close season in Lake Erie.
i—Except in waters specified in (d) where close season is from 1 Oct. to Nov. 30.
For British Columbia See Regulations.

CANADIAN FISHERMAN

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 104-105 HOMER ARCADE BLDG.
NEW YORK OFFICE: 206 BROADWAY

Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

ADVERTISING RATES ON APPLICATION

SUBSCRIPTION: Canada, Great Britain and United States, $1.00; Elsewhere, $1.50, payable in advance.

Vol. I. MONTREAL, MARCH, 1914 No. 3

HELPING THE FISH BUSINESS IN CANADA.

Canadians do not eat enough fish. If we consumed more than we do at present, there would be no necessity for our fishermen shipping the bulk of their catches to the United States and other countries.

At the present time it is only the hotels, restaurants and society people employing chefs who really insist upon having some kind of fish upon the daily menu, and who know how to prepare it. The ordinary citizen's fish eating is limited to but a few varieties cooked in one or two ways. Halibut, cod, haddock, salmon, trout, bass, and finnan haddie constitutes their range of fish foods, and they invariably demand them at the particular seasons when they are scarce. The price they have to pay causes them to remark that fish is as dear as meat, and no saving in the high cost of living. The lack of variety; ignorance of the art of cooking fish and apparently high prices, tend to keep down the consumption of fish in Canada.

Good cooking will do more to help the sale of a particular class of foodstuff than anything else. Combined with a wider knowledge of the varieties of fish and the periods of the year when they are plentiful and cheap, the housewife who really wishes to reduce the cost of living, can do nothing better than study the art of cooking and preparing fish properly. The Government has long recognized the necessity of an educational campaign in cooking fish as a means of encouraging the fishing business of Canada, and to that end a booklet entitled "Fish and How to Cook It" was issued by the Marine and Fisheries Department last year.

The little volume was compiled by Mr. J. J. Cowie, and the opening paragraph given herewith is well worth noting:—

THE VALUE OF FISH AS FOOD.

Sir James Crichton-Browne, M.D., D.Sc., etc., of England, has said: "It cannot be too strongly insisted on, that for working people of all classes, fish is an economical source of the energy necessary to enable them to carry on their work; and that for children and young persons it furnishes the very stuff that is needed to enable them to grow healthy and strong. It contains what is called proteid, the nitrogenous constituent which is mainly concerned in the formation of the tissues of which the body is composed, and it contains fat, one of the main sources from which the energy of the cells is derived."

That fish should displace butcher's meat in the dietary of the people of this country is not to be expected; but it is felt there is vast room for a substantial increase in the use of fish. The majority of people habitually eat too much butcher's meat, and could, with benefit to their health, reduce their meat allowance and increase their consumption of good, sound, fresh fish.

Fish as a food is to be recommended for its easy digestibility. It, of course, differs greatly in this respect, the lean kinds being more quickly disposed of than the fat, while the hardened fibres of salt fish prevent it from being so readily digested as fresh fish.

Fish is an unsurpassed food for brain workers who lead a sedentary life. It has a smaller proportion of nitrogenous material than meat, and is therefore less stimulating and exciting, an important matter in these strenuous, nervous days

But the digestibility and nutritive value of fish depends greatly on the manner of its cooking.

When brought to the table in a savoury form it stimulates the flow of saliva, and by its flavor sets the gastric glands in operation. With a view, therefore, to making fish more popular as an article of diet, and increasing its consumption, there has been collected, and printed in this booklet, a number of recipes which describe a number of appetising and inexpensive ways of cooking fish.

Interlarded with the recipes there will be found some interesting facts regarding the fish and fisheries of Canada.

If the booklet helps to make fish more popular as a food and thereby increase its consumption, the nation as a whole will be the gainer, and the fishing industry, which is carried on by one of the hardiest and kindliest sets of men the country contains, will be greatly stimulated.

The lack of variety is no excuse for not eating fish, as the booklet shows a dozen different and tasty methods of preparing salmon, mackerel, herring, haddock, cod, hake, pollock, halibut, flounder, skate, whitefish, fresh-water herring, oysters, lobsters, shell fish, etc. All easily and cheaply procurable fish foods and native to Canadian waters.

As a still better method of encouraging the eating of fish, we would suggest that this booklet be distributed throughout the country through the principal fish merchants and retail fish and grocery stores. Also in the numerous agricultural colleges where Domestic Science is taught, the teachers should give their pupils instruction in the art of buying fish in season and preparing it for the table. Copies of the booklet could be sent to every school teacher in Canada with the request that they help one of the country's great natural resources by teaching the children more about it. Much of the ignorance regarding fish will be dispelled by this means.

The cost of living in Canada is high enough, but if we were to make more use of our own natural resources in the line of foodstuffs, it would mutually benefit both producer and consumer.

THE TOLL OF THE SEA.

James B. Connolly, a well known American writer of fisherman stories, in one of his tales relating to the loss of a schooner and part of her crew, makes his hero remark while drinking a toast: "To h——l with them that's saved. Here's to them that died!" The words are simple, but to a fisherman the sentiment expressed is a noble one, and in looking over the list of the fishermen lost while prosecuting their business in the United States fisheries last year, we in Canada and Newfoundland cannot help claiming a more than ordinary interest in those who have passed out. Out of the twenty-six men lost, sixteen were Nova Scotians and New Brunswickers and four hailed from Newfoundland—a total of twenty men, and our own countrymen.

Canadians are largely identified with the fisheries out of Gloucester, Boston and Portland, and whenever a vessel or a man is drowned fishing out of these ports, it is invariably a Canadian or Newfoundland widow and family who have to mourn. Yet it is gratifying to note that the toll of the sea is lessening every year. Thirty-eight Canadians and Newfoundlanders were lost in the Gloucester fishing fleet during 1912, and 1913 claims but twenty. Let us hope that 1914 claims none.

HOSPITAL SHIP FOR FISHERMEN.

A movement for the construction and upkeep of a hospital ship for Bank fishermen is being promoted in Boston and Gloucester. An auxiliary schooner of the 95-ton semi-knockabout type and fitted up as a floating hospital with competent medical men aboard is proposed, and the vessel will be kept "jogging" on certain spots handy to the fleets fishing off-shore. The plan is an excellent one, and deserves the support of all Canadians interested in the Atlantic fisheries.

The vast number of Canadians fishing in American vessels render it almost imperative that support be given this proposition from Canada. Not only that, but the hospital ship will be open to our own fishermen sick or injured, and it is only right that we encourage the idea and help in establishing the proposition of our American friends.

Only those who have served a time at sea aboard vessels of the Banking fleet can adequately understand the necessity for such a craft. How many men have we seen suffering from the painful wounds incidental to the fisheries? Hands poisoned through rusty hooks: fingers smashed by being jammed in sheet-blocks and on dory gunnels when coming alongside a vessel in a sea-way, bones broken through being knocked down by a sea, frost-bitten fingers and toes, severe colds contracted by working in continual chill and wet, toothache, neuralgia and rheumatism—all fishermen's common injuries and ailments.

Take a man with a broken leg or arm out on the offshore grounds. What is the usual remedy practised at present? The bone is set in a rough and ready manner, but as well as his shipmates know how, and without anaesthetics the injured man has to grit his teeth and bear the pain while his unskilled comrades pull and maul him about while endeavoring to set the bone. Run him into the nearest port to a doctor is the next thing, and for probably two or three days the sufferer will lie in his bunk and feel jolt and jar of the vessel as she drives for the land. Ignorance of surgery and the delay may cause complications which will maim the man for life.

Wounds, slight at first, but through crude dressing and without antiseptics, have developed into septic poisoning with all the suffering which attends the disease. With a hospital ship handy, such a thing would never happen. How many fishermen have had to bear the agony of toothache while off-shore, and had to bear it until the trip was up? It is the little ailments which are the painful ones, and no Bank fisherman will throw cold water on the Hospital Ship scheme. They know, better than any, the manifold advantages of such a craft.

The Hospital Ship will necessarily be for the offshore fishermen too far off the land to conveniently run a sick man to port, but to adequately carry out the idea, more than one vessel will be required. The fishing areas from Georges to the Funks cover a huge stretch of sea, and one vessel can only be in a position to attend to a small majority. However, the idea will probably develop with the financial support, but as an auxiliary to the work we would suggest that a standard type of medicine chest equipped with simple remedies and appliances be furnished all Bank fishing vessels, and kept in charge of the master. A book of instructions, simply worded and plainly illustrated, should be furnished,

and vessel masters requested to make themselves familiar with the rules of "First Aid to the Sick and Injured." Thus, when a man is sick or injured, he can be properly treated until the Hospital Ship is picked up on her position.

Hospital ships are maintained in British waters for fishermen, and for some years now, the French have had a hospital ship—the "Saint Francis d'Assise"—stationed with the French fishermen working on the Grand Banks. The cause is a good one, and cannot be too highly recommended.

AMERICAN FISHERMEN WANT RECIPROCITY.

The Hon. A. Piatt Andrew is endeavoring to induce President Wilson to enter into negotiations with Canada and Newfoundland for a reciprocity arrangement which will give United States fishermen the right to procure bait, ice, etc., in Canadian and Newfoundland ports, without a license.

With the passing of the free fish tariff, American fishing interests claim that they are not given a fair show, and they demand that equal rights be granted United States fishermen in return for the opening of the United States markets to Canadians and Newfoundlanders.

A HARD WINTER ON THE ATLANTIC.

The months of January and February have been noteworthy this year, as two of the stormiest periods for Atlantic fishermen for many seasons. All the vessels, winter fishing, have had their share of wild weather at sea, and the majority of the crafts arriving in have had experiences well calculated to last most people the rest of their natural lives.

Gales seem to have followed one another in rapid succession, and in addition to fighting heavy winds and seas, the fishermen have had to contend with the bitter cold and "icing up." Vessels have been arriving in port looking more like miniature icebergs than schooners, and the usual tale has been one of pounding ice from the decks and rigging to keep the vessels from sinking with the weight of it.

Dories without number have been separated from the schooners during sudden snow squalls, but it is gratifying to note that without exception all the stray fishermen have made the land safely, though badly used up with the bitter cold.

The bad weather has had its effect on the fishermen —many of the schooners making scarce enough money to pay the store bill, and those craft which have not had to be bucking the weather lying-to outside, have had their anchors down in shelter harbors long enough for the mussels to grow on the mud-hook. The fish that have been brought in were snatched from the sea, between the gales, at the risk of the fishermen's lives.

As with the offshore Bankers, so has it been with the shore fishermen and lobstermen. Boats have been wrecked and traps and gear destroyed. The damage caused through the bad weather will more than offset the prosperity enjoyed by our fishermen through the advantages of the U.S. markets.

Fish can only exist in Pure Clean Water. It breeds in an Element of Purity. Therefore as an Article of Food it is superior to Beef, Mutton, Pork, and Fowl. That is Logic. Get busy and make the Logic known.

THE MODUS VIVENDI

An Historical Outline of the Origin of the Modus Vivendi License, and its Application to or Effect on the Canadian Fisheries.

(By L. H. MARTELL, B.A., B.C.L., Barrister-at-Law.)

The successful exploitation of the Bank Fisheries requires in addition to vessels in good order and condition, three important factors—available crews for the vessels, a convenient base of operation, and a supply of bait which is continuous.

The Atlantic provinces of Canada and the Colony of Newfoundland have bait supplies which are practically continuous; their shores are indented with beautiful harbours, while we may apply to each of them the words of Joe Howe concerning Nova Scotia: "She draws from every creek and cove and harbour, her children to share the treasury of an inexhaustible fishery." The Canadian provinces mentioned and Newfoundland are at the front door, so to speak, of the Bank Fisheries. Therefore, the people of Canada and Newfoundland are in a better position to carry on the Bank Fisheries than any other people or peoples.

Following the American war of Independence, the United States has been seeking by convention and in other ways, to gain as far as possible for her fishermen the important factors mentioned.

In virtue of the treaty of 1818 United States fishing vessels are admitted to enter Canadian territorial waters for the purpose of shelter, and of repairing damages therein, of purchasing wood, and of obtaining water, and for no other purpose whatever with the exception that around the Magdalen Islands and on the north shore of the Gulf of St. Lawrence from Point Joly eastwardly, where they have liberty to fish in common with British fishermen. But United States fishermen

are to be under such restrictions as may be necessary to prevent them abusing the privileges accorded them.

The desire on the part of the United States to gain greater privileges for its fishermen, and of Canada in past years to have free access to the markets of the United States for its fish led to many conventions, which embraced the fisheries.

The Reciprocity Treaty of 1854 permitted United States fishermen to take fish of every kind—save shell fish—on the sea coasts and shores, and in the bays, harbours and creeks of what are now the Atlantic provinces, and the several islands adjacent thereto, without being restricted to any distance from the shore. The United States fishermen were also permitted to land upon the coasts and shores of these colonies, as well as upon the Magdalen Islands for the purposes of drying their nets and curing their fish; provided however that they did not interfere with the rights and privileges of private property of the British fishermen. River and esutary fishing were reserved exclusively for the British fishermen.

The United States granted similar privileges off the United States coast north of the 36th parallel of North latitude to British fishermen. This concession was of no value to British fishermen. British fishermen were however, given free access to the markets of the United States for their fish and the products of their fish.

On the termination of this Treaty in 1866 by the United States Government, efforts were made for its renewal, and as a matter of grace and to prevent loss to United States fishermen by a sudden reversion to the Treaty of 1818, Canada decided to issue licenses for 1866 to United States fishing vessels covering the privileges in question, at a nominal fee. This practice was followed until 1869, when the license system was abolished, and in 1870 a fisheries protection fleet was inaugurated, which was known as the Marine Police. Her Majesty's North American squadron co-operated with this fleet in preventing encroachment of our inshore fisheries. This fleet maintained in 1870, 1871 and 1872, during which time about twenty United States fishing vessels were seized for infractions of the Treaty of 1818.

Following this came the Treaty of Washington, the proclamation of which was fixed for the 1st of July, 1873. In Canada the privileges contemplated by the Treaty were granted United States fishermen from the the 1st of April of that year; but in the United States the privileges were withheld to the date of its proclamation.

Under Articles XVIII. to XXV. and XXXII. and XXXIII of this Treaty the conditions of the Reciprocity Treaty of 1854, so far as the Fisheries are concerned, were renewed, and it was also provided under this Treaty that a commission should decide on the difference in value of the fishery privileges given by either country, as a result of which was the Halifax Award of 1877.

The Fisheries Articles of this Treaty were discontinued at the instance of the United States on the 1st of July, 1885, the United States Government having in 1883 notified Her Majesty's Government that such would be done.

Canada for the same reasons that obtained following the discontinuance of the Reciprocity Treaty permitted United States fishermen to enjoy the conditions under the Treaty until the end of the fishing season of 1885, though her fishermen were not allowed free entry for their fish to the United States; but the President of the United States agreed to bring the whole question before Congress at the next session in December of that year, and recommended the appointment of a Joint Commission to consider matters between the two countries. This recommendation did not, however, find favour with the Committee on Foreign Relations of the Senate, and the conditions under the Treaty of 1818 were revived, so that for the second time in 1886 Canada put on a fisheries protection fleet. During the next year or two, numerous seizures of and interferences with United States fishing vessels occurred, and heated diplomatic correspondence ensued, which culminated in negotiations which resulted in what is known as the "Unratified Treaty of 1888." This Treaty was formally ratified by the Imperial and Canadian Parliaments; but was rejected by the United States Senate, although their negotiators had agreed to it.

It was at this time that what have since been known as the "modus vivendi" licenses were introduced.

The following Protocols, dated at Washington, 15th of February, 1888, were attached to the Treaty:—

"The treaty having been signed, the Britsh plenipotentiaries desire to state that they have been considering the position which will be created by the immediate commencement of the fishing season before the treaty can possibly be ratified by the Senate of the United States, by the Parliament of Canada, and the Legislature of Newfoundland.

"In the absence of such ratification the old conditions which have given rise to much friction and irritation might be revived, and might interfere with the unprejudiced consideration of the treaty by the legislative bodies concerned.

"Under these circumstances, and with the further object of affording evidence of their anxious desire to promote good feeling and to remove all possible subjects of controversy, the British plenipotentiaries are ready to make the following temporary arrangement for a period not exceeding two years, in order to afford a 'modus vivendi' pending the ratification of the treaty:—

"(a) For a period not exceeding two years from the present date, the privilege of entering the bays and harbours of the Atlantic coasts of Canada and Newfoundland shall be granted to the United States' fishing vessels by annual licenses at a fee of 1½ dollars per ton for the following purposes:—

"The purchase of bait, ice, seines, lines, and other supplies and outfits.

"Transhipment of catch and shipping of crews.

"(b) If, during the continuance of this arrangement the United States should remove the duties on fish, fish-oil, whale and seal-oil (and the coverings, packages, etc.), the said licenses shall be issued free of charge.

"(c) United States fishing vessels entering the bays and harbours of the Atlantic coasts of Canada or of Newfoundland for any of the four purposes mentioned, in Article I. of the Convention of the 20th October, 1818, and not remaining therein more than twenty-four hours, shall not be required to enter or clear at the custom house, providing they do not communicate with the shore.

"(d) Forfeiture to be exacted only for the offences of fishing or preparing to fish in territorial waters.

"(e) This arrangement to take effect as soon as the necessary measures can be completed by the colonial authorities.

"The American plenipotentiaries having received the communication of this date, conveying their plan for the administration to be observed by the governments of Canada and Newfoundland in respect of the fisheries during the period which may be re-

"quisite for the consideration by the Senate of the "treaty this day signed, and the enactment of the "legislation by the respective governments therein "proposed, desire to express their satisfaction with "this manifestation of an intention on the part of the "British plenipotentiaries, by the means referred to, "to maintain the relations of good neighborhood be- "tween the British possessions in North America and "the United States; and they will convey the com- "munication of the British plenipotentiaries to the "President of the United States, with a recommenda- "tion that the same may be by him made known to "the Senate for its information, together with the "Treaty, when the latter is submitted to that body "for ratification."

The Canadian Act ratifying the Treaty (51 V. C. 30.) provided by Section 14 for the operation of the "modus vivendi" for a period of two years,—1888 and 1889. Subsection 5 of this Section declared the "modus vivendi" void, if the Treaty were rejected by the United States Senate.

In the hope of reaching some satisfactory conclusion of this troublesome question, and as a matter of grace, instead of discontinuing the licenses following the action of the United States Senate, 53 Victoria, Chapter 69, was passed by Canada on the 16th of May, 1890, continuing for that year the privileges conveyed by the licenses. This course was followed in 1891; but in 1892 to avoid the necessity of again going to Parliament, an Act was adopted empowering the Governor-General in Council to from time to time authorize the issue of such licenses. Since that time they have been issued yearly. "Modus vivendi" license to United States fishing vessels are now issued pursuant to the Revised Statutes of Canada of 1906 Chapter Forty-Seven, Section 3. In virtue of said section the granting or refusal of said licenses is at the option of the Governor-General in Council.

These "modus vivendi" licenses were also granted in Newfoundland; but when in 1905 the Bond-Hay Convention was thrown out by the United States Senate, Newfoundland retaliated by cancelling the "modus vivendi" licenses, and since that time there has been a notable increase in the number of licenses taken out in Canada.

The withdrawal of the "Modus Vivendi" would not be a fatal matter to the United States fishing vessels. Cold storage enables them to store up bait when it is available in their own country and hold it for times when bait is scarce. True, it might hinder them in obtaining crews, but even crews could be secured by the men going to the United States and joining in that country instead of joining in Canadian ports as they are permitted to do under the "modus vivendi."

Again, the Canadian fishermen finds in the American fishing vessels a market for his fish that are fit for bait, while the merchants of our seaports find in her an excellent customer. So on the whole, it is doubtful whether Canada is in any way hurt by the granting of the "modus vivendi" licenses to United States fishing vessels.

NEW FISHERIES ACT.

A new Fisheries Act to consolidate and amend the Acts respecting Fisheries and Fishing was presented to the House of Commons, Ottawa, by the Hon. J. D. Hazen, Minister of Marine and Fisheries, on February 16th.

The bill contains 91 articles, and is designed to cover every branch of fishing carried on in Canadian territorial waters.

FISHERFOLK

From out a hundred sea-ports on river, cove and bay,
The hardy, strong armed fisherfolk pursue their watery way.
They brave the cresting billows, they face the gusty gales,
With the throbbing, pulsing motor, or the wind filled, straining sails.
Then let the breezes blow,
And let the strong tide flow,
It needs be bitter weather when the dories cannot go.

Out on the ocean's bosom, they set the tempting trawl,
The famished fish which see the bait into temptation fall.
The hook takes hold, the barb sinks home, their fate is sad indeed.
They gravitate towards the plate—the human race to feed.
Stout haddock and great cod,
Fine halibut so broad,
Far distant tongues and stomachs their tastiness may laud.

In spring the shelly lobster along the bottom crawls,
But traps beset its pathway and it soon in prison falls.
The mackerel, shy and roving, when schooling find the seine
Enmeshed around their glittering horde, and fisherfolk will gain.
Strong swordfish fight with zest,
But the dog-fish, cursed pest,
Is the plague of every fisher and a most unwelcome guest.

By the sea coast born and bred, these fishers love the sea,
Tho' when the storm whipped breakers roar it oft can cruel be.
Sometimes, with little warning, it snatches down to death
As fine a fearless fisherman as ever drew a breath.
But this is of the life
A portion of the strife
And danger's sense is stilled where uncertainty is rife.

Then here's to every toiler that launches on the tide,
A living for dependents and dear ones to provide.
But most to every stalwart heart on Nova Scotia's coast,
Because they are our own, and we therefore love them most,
Long life and happiness,
Few failures to confess,
And may the good and gracious God, their every effort bless.

—CECIL BOYD, Canso, N.S.

Reuben Raymond, a Trout Cove, N.S., boat fisherman, in one set off the Nova Scotia coast caught $80 worth of fish, and in two weeks earned $400.

Capt. O'Neil and crew of the schooner Thomas S. Gorton, report being frozen in at Shelburne, N.S., with a number of other Gloucester crafts and the Canadian cutter Petrel broke the ice and towed them out.

THE FISH AND FISHERIES OF HUDSON STRAITS

Based on Observations Made During an Official Patrol, October 1912, to September, 1913,

By THOMAS TANNER, Dominion Customs and Fishery Officer.

The waters of Hudson strait so far as fisheries are concerned, may be regarded as a virgin area, and though no thorough investigation of these resources has been made, the result of my investigations from October, 1912, to September, 1913, shows that there are supplies of valuable fish which could be made of great market value and are well worth development.

The two difficulties are: 1st. The sparse population and consequent lack of fishermen; 2nd. The short seasons, which would involve all the work being done in a short time. These two difficulties can be easily overcome. The example of British Columbia proves this. The British Columbia coast had until recently a very limited population, and the runs of the principal fish were confined to a few months in the year. Notwithstanding that, the Pacific fisheries of Canada have developed enormously and in some years the catch of British Columbia salmon, halibut, etc., has exceeded that of cod and lobsters combined. Thus in 1910-11 salmon amounted to $10,333,070, while lobsters and cod reached the value of $8,991,963 (lobsters $4,790,203, and cod $4,201,760).

It may be noted that lobsters, mackerel, halibut, oysters and smelt do not occur so far as I was able to observe.

From a commercial standpoint the cod is the most important fish and there is no regular cod-fishing carried on. As Rev. S. M. Stewart informed me (to quote his own words), "There is no limit to the quantity of cod fish." "Some years ago," added Mr. Stewart, "Newfoundland vessels were here, but none have come for the past eight or ten years." A few small schooners from Newfoundland come up every year and get full loads of codfish and other fish.

The weather is perfect for fishing, but not so favourable for drying them on the spot, but the catches can be salted and taken home to the curing places just as is the practice of the Lunenburg fleet. As this is deep sea fishing no doubt a bounty could be authorized during the first few years when the industry is in its first stages of development. The sum of $160,000 per annum is available "to encourage the development of the sea fisheries and the building of fishing vessels," as the title of Fishing Bounty Act states.

There are probably about 500 Eskimo who would be available as practised fishermen if the project of utilizing these cod fisheries was carried out and white men appointed to superintend the operations. Eskimo women are as expert at fishing as the men, and are accustomed to do as much work as the men, so that full crews could be relied upon and they are hard workers, steady and reliable, if under proper superintendence.

I am of opinion that such Eskimo fishermen and women would be far more reliable than the Indians of the Pacific coast. Wherever wages are offered to them they are found to be the best and most reliable workers to be obtained and as they are all British subjects and residents in territory belonging to the Dominion of Canada, they would be fully entitled to the benefit of the Fishing Bounty Act, in my opinion.

Port Burwell would be the best centre as it has two harbours, the inner and outer harbours, and there are the finest fishing grounds within easy reach on all sides. The Eskimo would come from other localities and camp at Port Burwell, although at the port tself there are always a number of Eskimos, say about 140 men, women and children. The chief method of fishing would be by baited trawls rather than by inshore traps and 8 to 12 weeks would cover the fishing season.

With respect to the salmon family three kinds occur including the true sea salmon, the salmon trout, sometimes called Arctic salmon ranging from 5 lbs. to 8 lbs.; "A fish," Mr. A. P. Low says in his report on the "Neptune," 1906, page 297,, "superior to the best Pacific salmon, and indeed of such good table qualities that there would be a great demand for it in the best markets. I found this fish delicious and of far better flavour than any other salmon or salmon trout that I ever tasted."

The Eskimo have been accustomed to dam streams in the fall when the salmon trout are running up to spawn and they got their winter supplies in this way. During the summer months these fish are plentiful off the shores, not only along the south shores, but on the coast of Baffin Land, where I myself saw them on many occasions. Nets would require to be used to take them during the summer, and I saw the nets which are used. I pointed out that the nets should be of larger mesh, not less than 5 inches, but they have used nets of 2½ to 3 inches mesh. After my warning them that the Fisheries Act specified a larger mesh the agents of the Hudson Bay Company, and of the missions, promised to inform the Eskimo and as they make their own nets from twine bought at the stores, these nets will in future be of larger mesh as the law requires.

The chief export of salted salmon trout in barrels is to St. John's, Newfoundland, but the annual quantity put up could be vastly increased were the fishery systematically developed. There is no energy or enterprise at present and the fishing done is simply to supply the local needs of the posts, and winter food at the Eskimo camps, the fish being stored under rocks, covered with snow near their igloos or winter houses. The export is at present very limited.

There is a great future for a profitable industry if the enterprise was pushed by practical men. The cost of the fish is really nominal and the price realized in the market for these pickled salmon would be more than double the cost. They might be frozen and shipped on refrigerator boats and it could not fail to pay well, as the fish are of such exceedingly fine quality. The supply is now unlimited and the price they would bring if properly handled would, without question, equal that of the best frozen salmon now retailed at 15 to 20 cents per pound.

The seal and white whale industries are capable of being better utilized. Both these animals yield the finest oil which when refined is in demand as one of the best machine lubricating oils, while the skin makes excellent leather and the Eskimo boots and clothing made from it are very lasting, flexible and of fine texture. No leather is more serviceable. The meat is always in demand for food for the Eskimo tribes and their dogs, and they keep a supply frozen to meet their winter requirements.

The whaling has so declined that practically few or no whalers frequent these regions, in contrast to the great and active whaling industry carried on for over a hundred years by whalers from Scotland, the United States and from Gaspe and a few other posts in Canada.

The Hudson Bay Company also tried whaling according to their records, which I saw, but they found it did not pay, and have long ceased to carry on this fishery. I saw five whales in the strait which were declared to be the valuable right whale or bow-head.

I may add that I resided in this northern area from October, 1912, to September, 1913, and I visited Baffin Land and other distant places along the strait.

Co-operation in the Fishing Industry

By COLIN McKAY.

Charles H. Harvey in "The Biology of British Politics," says: "Observation of the growth of societies shows that progress is always the result of substituting combination for competition." The fishing industry affords some striking illustrations of the truth of this proposition. The application of the principle of combination or co-operation raised the town of Lunenburg, N.S., to the position of the Gloucester of Canada. Had Lunenburg extended the operation of this principle to the problem of marketing fish and assuring a bait supply, its progress would doubtless have been greater than it has been.

The story of the development of Lunenburg's fine fleet of fishing vessels is an interesting and inspiring one. At a time when other ports were abandoning the Grand Bank fisheries, Lunenburg steadily built up a fleet of fishing craft famed for their beauty of line and form, and their speed and behavior in a breeze of wind. Numerous small co-operative societies were formed; practically every man in the town and county with a few hundred dollars took shares in fishing vessels in which they sailed. At the period this development was going on most rapidly, prices of fish were low, as compared with to-day, but since the majority of fishermen shared in the profits of the vessel, as well as drew his share as a hand, their returns for the time they worked were good; and Lunenburg became a town of fine homes and great business activity for its size. Every enterprising young man wishing to become a skipper organized a company to supply him with a vessel, and the shipyards at Lunenburg, Mahone Bay and Lahave were kept busy.

But with the rapid increase in the number of vessels and the changes in market conditions in the West Indies, Lunenburg had difficulty disposing of its catch on a profitable basis. As the fishermen's share depended on what was received for the catch, the Grand Bank trip ceased to have attractions for a considerable number of men, more especially as about the same time good money was being made in the shore fisheries, and there was a demand for men in shore employments. Lunenburg had a dozen or more vessels lying idle for several summers, and instead of building, the people began to sell their vessels. Another difficulty the Lunenburgers had to contend with was that of getting bait.

While Lunenburg's experience has demonstrated the value of the application of the principle of co-operation to one phase of the fish industry, it has shown equally as clearly the importance of better organization and co-ordination of the various branches. If the Lunenburgers had tackled the other problems of the industry in the same spirit of co-operation, their port would have made greater progress, their efforts would doubtless have been attended with more success. They should have established a cold storage plant to assure their vessels a supply of bait; they should have organized marketing facilities on their own account, and given proper attention to the development of the fresh fish business.

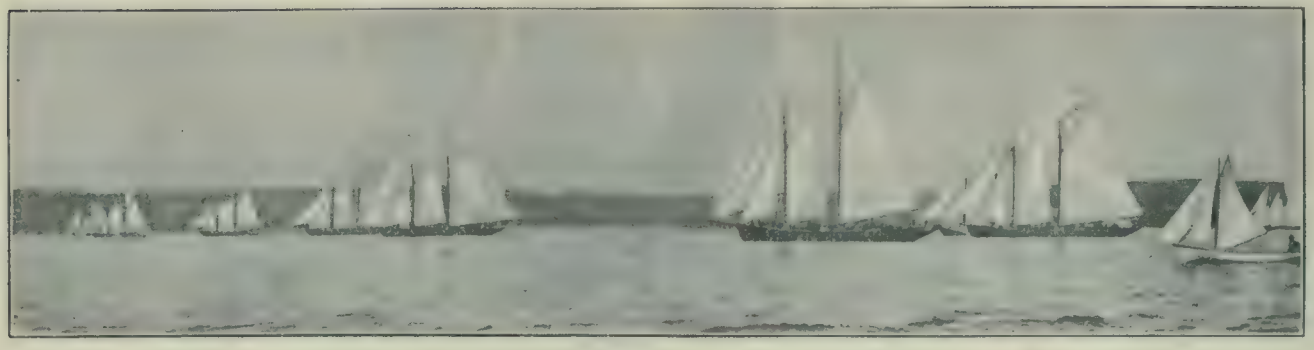
As a whole, the fishing industry of the Atlantic Coast of Canada presents many opportunities for more systematic organization, and better co-ordination of the various branches. In order to effect improvement in this direction, those interested will have to get together in the development of such functions or facilities as tend to promote the progress of the industry as a whole. The old doctrine that competition is the life of trade has been revised in most other businesses. Nearly every industry, trade, or business, now has its association in which men meet to exchange ideas, discuss mutual problems, and devise means of advancing the welfare of the industry or trade as a whole. An article in a recent number of the Saturday Evening Post emphasizes the importance of the spirit of association, and shows how great an effect the trade association may have on the development of the best interests of the trade as a whole.

The manager of an important fish concern in Nova Scotia told me he would not look at orders for fresh fish from Montreal in summer. In winter his firm ships large quantities of fresh fish to Montreal and other cities. It has established a reputation for putting a fine quality of fresh fish on the market, and it is not difficult to land fish in Montreal in cold weather in good condition. But in summer, with the facilities for shipment at present available, it would be impossible to guarantee the arrival of fresh fish from his district on the Montreal market in good condition.

That is a problem that would seem to be worthy of attention, and probably it is not unsoluble. In the hot days of summer the Montrealer would no doubt prefer to eat more fish than meat, and if a good supply of Atlantic fresh fish could be placed on the Montreal market in good condition in hot weather, the consumption of the Canadian Fisheries," which, coming from a for the trade as a whole to tackle. And it is only one of the problems which an association of dealers, wholesale and retail, as well as producers, might tackle to the advantage of the industry generally.

FISHERY LAWS.

Mr. Lewis H. Martell, B.A., B.C.L., member of the Bar of the Province of Nova Scotia, whose article on the "Modus Vivendi" license appears in this number, has been closely connected with the fishing industry for many years. Until recently, Mr. Martell was Assistant Superintendent of Fisheries at Ottawa, and resigned last month to resume his law practice in Windsor, N.S. "The Canadian Fisherman" will shortly publish a comprehensive article by Mr. Martell on the "Legal Position of fish would doubtless increase. It is a problem gentleman who has an intimate knowledge of what he is writing about, should be carefully read by every fisherman and those connected with the industry.



THE LOG OF A HIGH LINE HALIBUTER

By F. WILLIAM WALLACE.

PART THREE.

PHOTOGRAPHS BY THE AUTHOR

Wednesday, May 28th.—Stood out to sea this morning at daylight in a stiff southerly breze. Located the gear and hoisted dories out. 9 a.m. Breezing up. Dories striking fish. Oars up on the weather dories—the signal for the vessel to come alongside and lighten them of their load. Afraid we're in for a breeze of wind. Cook and I clewed up topsail and hauled jib off her. Skipper to the wheel nursing the vessel in squally wind and rising sea. Cook and I tending to the dories and dragging the halibut over the rail. 11 a.m. All the dories on fish and loading up on one and two skates of gear. Big, breaking sea running. Wind blowing stiff and the vessel with her huge mainsail on her is rolling her lee rail under. Decks piled with halibut, and as our decks are not checkered, they slide out of the pens and take charge when the schooner rolls down. Jerry and I kept busy stowing and trimming the fish. A tough job handling such heavy fish on decks slippery with slime and lurching with the dives of the vessel. Both of us within an ace of going over the side several times. Noon. Wind and sea becoming dangerous for the dories. Bent the ensign to the weather rigging as a recall signal for the men to buoy their remaining gear and come aboard as quickly as possible. 3 p.m. All dories aboard. Ugly steep, breaking sea running. One dory filled by a sea and men had to heave a 200 pound halibut over the side to lighten her. 15,000 pounds of halibut on deck—good haul. 3.30 p.m. Took in the mainsail, triced up jib and hove-to under foresail and jumbo. Rain, wind, S. E. Dirty night.

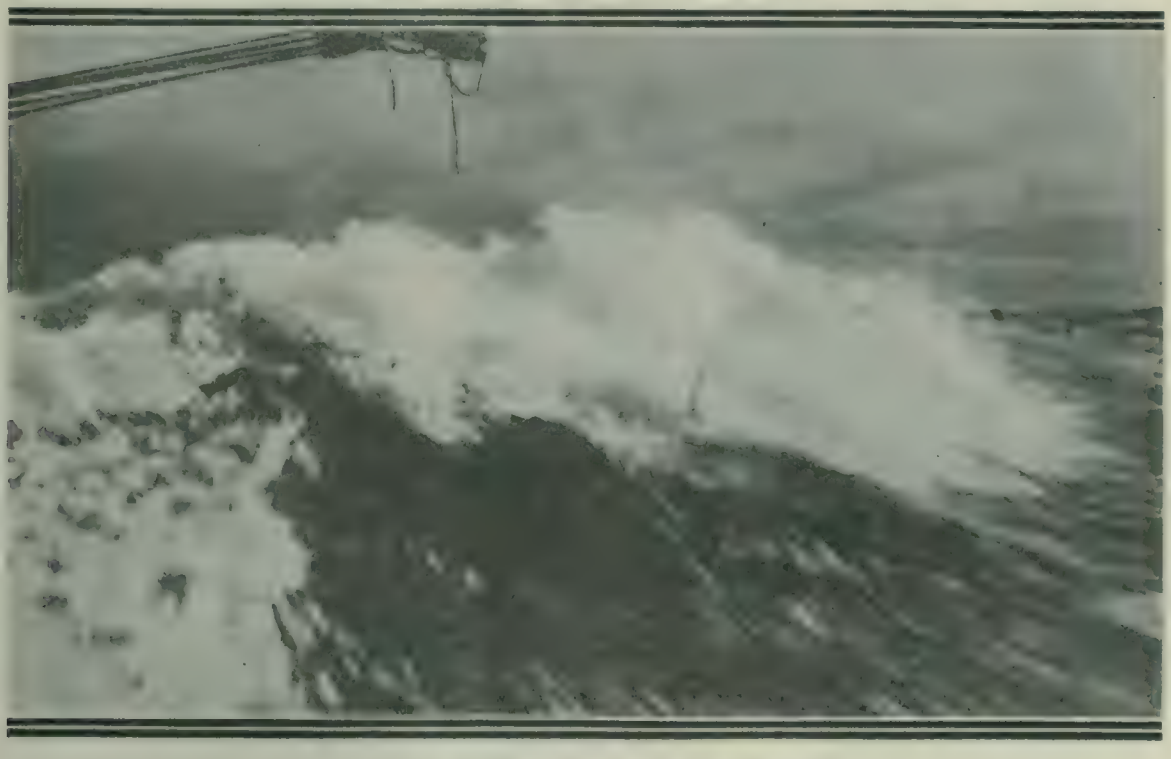
Some Anticosti Halibut.

Thursday, May 29th.—Weather moderating. Hoisted sail and stood to east'ard to pick up remainder of gear. 10.30 a.m. Picked up buoys. Out dories to

haul the trawls. 3,000 pounds of halibut brought aboard. In the afternon, baited up and set gear in same spot. Breezing up again from south'ard. Barometer falling. 6 p.m. Took in mainsail and jib. Hove-to off West Point. 12 midnight. Raining and blowing a southerly gale. Rough sea. Vessel would not tack in our watch. Made five attempts, but had to jibe her eventually. Nasty night.

Friday, May 30th.—Lay hove-to until 10.30 a.m., when we set the riding sail and stood to the east'ard to pick up the gear. 4 p.m. Too rough to remain outside. Swung in for shelter to Ellis Bay. Glass very low—28.7. Blowing hard from N.W.

Saturday, May 31st.—Clear, cloudy, fresh N.W. wind. Hoisted sail and stood out to sea at 11 a.m. Picked the trawls up at 2 p.m. and had dories overhauling an hour later. 4 p.m. Striking fish again. Oars up-ended all along the string. Some loaded up on a single skate of gear with a thousand to fifteen hundred pounds of halibut. Most of the dories made three



A Steep, Breaking Sea was Running.

discharges from off their trawl. 7 p.m. Dories all aboard. 16,000 pounds of halibut, 2,000 pounds of cod. Dressed down fish until midnight.

Sunday, June 1st.—Went out in the dory and hauled our gear. Got 600 pounds of halibut and some codfish on it. Took a sight at noon. Ship's position by observation 49.40 north latitude. Set the gear again, and as it began to breeze up we stood in for Ellis Bay. Anchored behind breakwater. 6 p.m. An engine has come down the breakwater for us—the skipper and myself—to spend the evening at the manager's house. Cleaned up, boarded the locomotive and came ashore. At the foot of the pier a livery rig awaited us and we were driven up to a bungalow. Quite surprised to find ourselves among a congenial crowd of Americans—all old Princeto wn and Yale men—who run the Mill, the office, and the engineering plant. With the genial Harbormaster, Captain Fitzpatrick, and the others, we put in an evening and a half with the piano; cigars aglow and the congenial company. Here's my best wishes to those boys sticking it out on lonely Anticosti.

Coming off to the vessel late that night, we found it blowing a lively gale, with the sea making a clean breach over the breakwater. A Lake steamer was in astern of us. and we had to turn to and berth outside of him, so that he could get in behind the breakwater. It was quite a job in such a wind with the swell swinging in, and as I got drenched coming down the breakwater, I nearly froze to death by the time we warped the vessel outside the steamer.

Monday, June 2nd.—Wind moderated. Dull, sky overcast. Stood out to sea at noon. Heavy swell. Breezing up again. Made buoys, but too choppy to haul gear. Tacked ship and stood back into harbor again. Made the 12 miles inside of an hour in fresh breeze.

Tuesday, June 3rd.—Light westerly wind. Set all the light sails to get vessel off to the gear. 8.30 a.m. Dories away to haul the trawls. Oars up-ended before gangs have hauled half a skate. Striking fish. Noon. Relieving dories of their load. Decks littered with halibut and cod. One dory had to be lightened five times. 3 p.m. Decks full to the rail with fish—all the quarter and maindeck. About 25,000 pounds of halibut and 10,000 of codfish — a big jag. Baited up and made another set. 5 p.m. Cook and I hauled our gear, but got snarled up on third shot, and had to cut adrift. One 150 lb. halibut and 17 large cod. As soon as we came aboard, the vessel swung off for Ellis Bay again in fresh breeze with all hands dressing down the big deck of fish. Midnight. Gang still working on the fish. Vessel alongside the breakwater. Electric arc lights switched on for our benefit and our decks are illuminated brilliantly. Last fish in hold about 1.30 a.m.

Wednesday, June 4th.—Vessel on the ground. Floated at 2 p.m., when we swung out to sea again to haul gear. 6 p.m. Dories aboard with 5,000 lb. halibut, 4,000 lb. cod. Put watch buoy over to mark the spot where we made our big hauls and jogged to the light all night. Clear, starlight night. Fame Point light visible 35 miles away.

Thursday, June 5th.—Baited up and set the trawls. In the afternoon it came away squally with a heavy swell. Took in the mainsail and triced up jib. Hove-to under foresail and jumbo. Dirty night. Wet and windy.

Friday, June 6th.—Breakfast this morning at 2.30 a.m. Dories away at four. Noon. Dories aboard with 10,000 lbs. halibut and 2,000 lbs. of codfish. Sky overcast; sharp breeze, heavy southerly swell. Cook and I hauled our gear. Got five halibut—one a 250 pounder—and 25 codfish. 4 p.m. The time is now up. Bait finished. I was at the wheel when the skipper sung out "South by East!" and I swung her off on the homeward bound course, while the gang put the mus-

Pen of Codfish.

lin on to her. Various estimates over the supper table as to the amount of our trip. Some say 60,000 pounds vessel. 5.30 p.m. "Mouse your pots and kettles, of halibut, others put it as 75,000 pounds. At all events it is a good trip and a high liner for a Canadian Cook, for the 'Lutz' is homeward bound!" Vessel heading for the Deadman's Rock off the Magdalens at a twelve knot clip with her lee scuppers a foot deep in the water. Vessel is so deep with her load that she is almost awash aft and the quarter is never dry. 8 p.m. Raining. Wind coming away heavy. Decks like the side of a house and lee rail buried. Took in light sails—balloon jib, topsail and staysail. Leeson and I had tough job unbending the balloon jib. Sail heavy and wet; snap-hooks hard to unfasten, and fingers numb with the cold. It was a wonder the sail didn't burn up with the heat of the curses levelled at it. Rough, dirty night. 9.30 p.m. Watch on deck sighted a steamer heading for us. All hands turned out in a hurry. Lit torches and blew the fog horn until the other swung across our bows. No one aboard take any chances with steamers since the mainsail, mainboom and gaff were torn out of the schooner by a steamer last spring. Wind east and variable. Knocking her off at intervals.

Saturday, June 7th.—Five liners have passed in the early morning when we crossed the track of the Montreal boats. 5.30 a.m. Raining and blowing squally from the east'ard. All hands called to take in the mainsail. Set riding sail. Vessel rolling and pitching. Very wet on deck owing to the load below. 11 a.m. Moderating. Took in riding sail. Hoisted mainsail and topsail. Took a sight at noon. Made it latitude 48 deg. 22 min. North by observation and 48 deg. 30 min. by log—8 miles difference. 4 p.m. Wind gone. Calm. 6 p.m. Breezed up from N.E. Vessel on her course. 9 p.m. Fresh breeze. Vessel running to south'ard, with sheets started. Midnight. Passed over Orphan Bank.

Sunday, June 8th.—Fine, sunny, clear. Wind north. Vessel heading S. Winged out and knocking off a good rate of knots. Raised the land early in the morning. Took it for the Magdalens, but when it showed up on starboard hand as well, we discovered it to be Prince Edward Island. Current set vessel away to west'ard of her course, and log failed to record distance run—vessel having over-run her distance. Hauled vessel up and skirted the coast. 2 p.m. Passed East Cape and squared away for Port Hood. 6 p.m. Judique highlands on port bow. Wind dropping. 10 p.m. Flat calm. Clear, starlight night.

Monday, June 9th.—Put power dory over to tow vessel. Hauled her along at 3 knots. 10.30 a.m. Wind coming away from S.W. Passed in by North Canso Head at 11.30 a.m., and beat up the Straits. 2 p.m. Passed Cape Porcupine. Off Mulgrave, I went ashore in power dory and telephoned to the manager of the Maritime Fish Corporation at Canso the particulars of our trip. When I got through sending tele-

grams for bait, etc., the schooner was lying to the wind off Mulgrave wharf. Got aboard and swung off at 3 p.m. At 5 p.m. we arrived off the north passage to Canso harbor after making the 25 miles from Mulgrave in two hours. The Corporation's steamer met us and we towed in alongside the wharf and rolled our sails up.

Tuesday, June 10th.—All the fish discharged by 6 p.m. We are the highline halibutter of the Canadian Bank fleet. Of halibut, we weighed off 81,000 pounds —the largest amount ever landed in Canada by an Atlantic halibutter. Of codfish, we had 15,500 pounds of

One of the Big Fellows.

fresh, and 12,000 pounds of salted fish. When the stock was made up, each man shared $137.00—a remarkably good share.

In this account, the writer can but give the bare facts relating to the fishery and the places visited. The social part of our life at sea has not been touched upon. The yarns of the lay-offs; the quizzing and joking; the foc'sle gramophone concerts; the characteristics and sterling qualities of my shipmates; the resolution and iron nerve of the kindly Captain Apt during the "blue days" at the commencement of the trip, and his wonderful handling of the vessel in stormy weather have not been commented upon. These things would take up more space than we can give, but for good shipmates and true friends with hearts as big as their bodies, I would have you bunk, eat, and work with the men of the offshore fleets. So ends this log.

F. WILLIAM WALLACE.

Fisheries Statistics

January, 1914.

The total value of salt water fish in first hands, landed in Canada during the month of January, 1914, amounted to $622,189, which is $3,195 less than the total for January last year. This slight decrease may be attributed to less favourable weather conditions for the taking of certain kinds of fish.

Compared with the catch for January, 1913, there is a shortage of 3,255 cwts. in the smelt catch. The halibut fishing for the month resulted in 4,796 cwts. being landed, against 7,485 cwts. for the corresponding month last year.

The total pack of canned lobsters from the 15th of November to the end of January, was 9,259 cases; while the total shipment in shell was 18,349 cwts. During the corresponding period in the preceding year the pack was 5,419 cases, and the shipment in shell, 20,208 cwts.

The herring catch in British Columbia for the month of January was double that for the same month in the preceding year.

A Field for Boneless Fish

The Daily Mail in a recent editorial, says:—

With the idea of eating fish is associated the idea of finding bones in the fish, with the insinuating sense of fear that one or more of these bones will stick in the throat. Imagination paints a vivid picture of a sickening feeling of suffocation, big eyes, gasping throat—curtain!

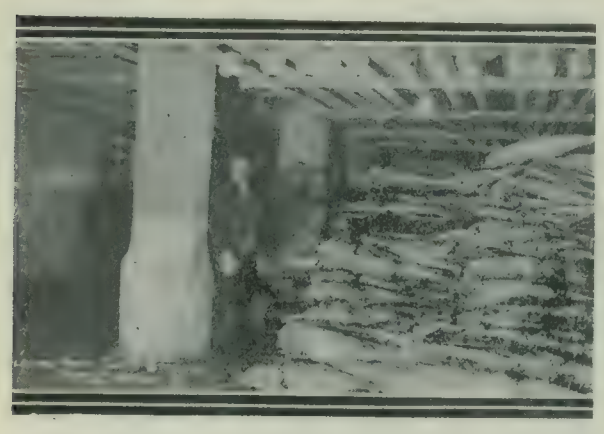
To make a long story short; a lot more of us would eat fish if there were no bones to form an imaginative skeleton at the feast. The popularity of sardines is due to the absence of troublesome bones. The popularity of smelts and finnan haddie is due to the ease with which one may remove the danger at a single stroke. Lobsters and oysters are gaining groud rapidly, as well as boneless codfish. What is the natural explanation? People move fast, these days, and eat fast. They begrudge the time it takes to pick bones out of their viands, apparently. They would rather cut a chunk out of a steak, adopting a care-free attitude the while, than steadily pick their way to a hearty meal through a forest of bones infested with imaginary wild animals which may cause physical pain.

This tendency to avoid fish on the part of the people is deplorable. Fish is good food, wholesome and invigorating. In fact, some people go so far as to say it induces brains to form in the heads of the eaters. Others go so far as to support this claim by drawing a nasty illustration from the present tendency of the public to avoid fish. It ill becomes those who don't eat much fish to express an opinion as to this. The lesson of it appears to be that those who are not satisfied with the brains they have now—a class which we hope is increasing—might try fish. Fish are intended to be eaten as well as to be caught.

PRINCE RUPERT---A FUTURE GRIMSBY

By PERCY F. GODENRATH (Commissioner, Prince Rupert Board of Trade.)

While for years past the Naas and Skeena river canneries have contributed a goodly percentage of the annual total of the Salmon pack of the Province which the past season amounted in round figures to $7,800,000, it is only a brief period since active interest became centered in the possibilities of deep sea fishing in the water contiguous to Prince Rupert. The industry is still in its infancy, but large sums of money are being spent in the construction of modern cold storage plants, boats, gear, etc., and to-day there are five such plants in the "Comox-Atlin" district, besides 42 canneries.



Halibut in Canadian Fish & Cold Storage Glazing Room.

The total valuation of the northern fisheries for 1913 was $1,287,315 as given by Mr. Stewart Norrie, the local Dominion Fisheries Officer for the northern district of British Columbia. The following shows the quantities and value of fish landed green for this district:—

	Cwt.	Valued at.
Salmon	161,300	$810,409
Halibut	75,768	378,900
Herring	93,390	93,840
Cod	1,055	3,225
Mixed Fish	.....	885
		$1,287,315

Of the local companies the largest is the Canadian Fish & Cold Storage Company, managed by Mr. George E. Collins. The plant is ideally located on the outskirts of the townsite fronting the harbor and with railway trackage facilities, and together with the salmon cannery a short distance further on, and across on the opposite side of the harbor represents an investment of $1,200,000. This includes the necessary expenditures for three steamers and five big "smoke" boats, together with gear, etc. The cold storage is modern in every particular, and has a capacity for 14,000,000 lbs. of fish. Besides their own warehouses and offices in Vancouver, B.C., Calgary, Alta, and Chicago, Ill., the company is now shipping fresh and frozen halibut and salmon to all the principal centers in the United States, as far east as New York besides to Montreal and Toronto. Only recently 12 car-loads of frozen halibut were sent across the continent and Atlantic to Grimsby, England, as an experiment, and not only arrived in splendid condition, but were quickly disposed of.

At the start, the company's fleet of boats were equipped for fishing with dories, the larger vessels having from 10 to 12 boats apiece. In fine weather fishing from the small craft proved successful, but for continuous operation it was soon found that a change would have to be made, as in rough weather the fishermen were unable to go out. Consequently, the management converted two of the larger steamers, the "James Carruthers" and the "George E. Foster" to line haulers, following the style adopted at Grimsby, England, and dispensed with dories. The experiment has proved most successful, and in a short time, as soon as the necessary machinery and equipment arrives, all the boats used by this company will be equipped for long lining. As an instance of the success achieved by the new method, Manager Collins claims a world's record catch of 120,000 lbs. of halibut with nine fishermen on the "James Carruthers," which was out ten days, travelling a distance of 750 miles to and from the banks off Yakutat, Bay, Alaska.

At present all the fish assembled here or at such points as Haysport and Claxton, where cold storage plants are in operation, are shipped to Vancouver for rail-transportation, south or eastward, but with the completion of the Grand Trunk Pacific Railway, not only the local, but all the Alaska shipping business will be concentrated at Prince Rupert, thereby allowing the fish to reach the markets of the east two days earlier than they do now. An effort is also being made to extend continuous bonding privileges to United States fishing boats wanting to erect their own cold-storage plants here. Under the present arrangement a foreign company only has a 24-hour bonding privilege, which

Canadian Fish and Cold Storage Plant.

means that the fish must be shipped immediately after being landed, whether or no market condtions were right. When the G.T.P. is completed—and the contractors expect to link up steel not later than June—American companies engaged in the northern waters would prefer to ship from the nearest port, but if they have to ship inside of the 24-hour limit after landing, they would undoubtedly find it more profitable to make

Seattle their shipping point, as at present. This question, together with the privilege of free bait, is now engaging the attention of Herbert S. Clements, M.P., the energetic representative at Ottawa of the Comox-Atlin constituency.

Teeming with edible fish the waters of Northern British Columbia and Alaska offer unlimited opportunities for those engaged in the business, and the Hon. J. D. Hazen, Minister of Marine and Fisheries had no fallacy of vision when he stated on the floor of the House of Commons this session, that Prince Rupert would become the greatest fishing port in the world. He has seen for himself the possibilities of this infant industry.

WHOLESALE FISH PRICES, MONTREAL MARKET.

(Quoted by D. Hatton Company.)

Volume of Trade the largest on record. As a consequence a few lines are exhausted amongst them—green codfish, salt eels, pickled lake trout, and frozen haddock, steak codfish, bloaters, kippers are still in good supplies, while haddies are giving out repeatedly. Due to stormy weather on the Atlantic Coast for the past two weeks hardly any fresh has been shipped. For the same reason the oyster trade has suffered largely. Lobsters have reached prohibitive prices. All kinds of western coast frozen fish and frozen lake fish are in good supply, and prices have even a tendency to sag. In all the other lines, prices are well maintained.

Smoked Fish.

Haddies, 15 lb. boxes new . . . . . per lb.	.09
Haddies, 30 lb. boxes, new. . . . . per lb.	.08
Haddies, Fillets . . . . . per lb.	.12
Yar. Bloaters, 60 in a box, Niobe—selected . .	1.10
St. John's Bloaters, 100 in a box	1.10
Smoked Herrings, medium, per box	.13
Smoked Boneless Herrings, 10lb. box.	1.00
Kippered Herrings, Niobe—selected.	1.10

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.15	.16
Salmon, Red—Steel heads, per lb. . .	.12	.13
Salmon, Red—Sockeyes, per lb. . . .	.10	.11
Salmon, Red—Cohoes or Silvers, lb.	.09	.10
Salmon, Pale Qualla, dressed, per lb.	.07½	.08
Halibut, white western, large and medium, per lb	.08½	.09
Mackerel, Bloater, per lb.	.07	.08
Sword fish, whole chunks, per lb. . . .	.08	.09
Haddock, medum and large . .per lb.	.05½	.06
Market Codfish. . . . . .per lb.	.05	.05½
Steak Codfish . . . . . .per lb.	.06	.06½
Pollock . . . . . .per lb.	.04	.04½
Tommy Cods . . . . . .per brl.	1.75	
Smelts, medium to large . . .per lb.		.12
Smelts, small . . . . . .per lb.		.05
Flounders . . . . . .per lb.		.05
Canadian Soles . . . . . .per lb.		.08
Blue Fish. . . . . .per lb.	.16	.17
Striped Sea Bass, large. . . . .per lb.	.17	.18
Striped Sea Bass, small. . . . .per lb.	.12	.13
Sea Trout . . . . . .per lb.	.10	.11

Frozen Fish—Lake and River.

Shad . . . . . .per lb.	.10	
White fish, large . . . . . .per lb.	.10	.11
White fish, small Tulibees . . . .per lb.	.06	.06½
Lake Trout, large and medium.per lb.	.11	.12
Dore, dressed or round . . . . . .per lb.	.09	.10
Pike,dressed and headless . . .per lb.	.06½	.07
Pike, round . . . . . .per lb.	.06	.06½
Eels . . . . . per lb.		.10
Perch . . . . . .per lb.	.09	.09
Carp. . . . . .per lb.		.12

Pickled Fish.

Salmon Labrador Tierces 300 lb.	21.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C. Brls.	14.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs. . . .	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.00
Herrings, Labrador, Half Brls.	3.25
Herrings, Nova Scotia, Brls	5.75
Herrings, Nova Scotia, Half Brls.	3.00
Lake Trout, Half Brls.	7.00
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Turbot, Brls.	15.00
Tongues and Sounds, per lb.	.10
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs	1.25
Holland Herrings, imported milkers, half brls.	6.50
Holland Herrings, imported milkers, kegs. .	.75
Holland Herrings, mixed, half brls.	6.00
Holland Herrings, mixed, kegs	.65

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brl.	
No. 1 Green Cod, small, brl.	
No. 1 Green Cod, Haddock, medium, brl.. . .	8.50
No. 1 Green Cod, Haddock, small, brl. . . .	7.50
No. 1 Green Cod, Pollock, medium, brl. . . .	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	7.00
Dried Pollock, medium and large, 100lb. bund.	7.00
Dressed or skinless Codfish, 100 lb. cases . . .	7.00
Boneless Codfish, Ivory Brand, 2lb. blocks, 20 lb. boxes, per lb.	.07½
Boneless Codfish, Dreadnought Brand, 2 lb. blocks, 20 lb. boxes, per lb	.06½
Boneless Codfish, strips 30 lb. boxes	.10
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, n 2 lb. and 3 lb. boxes	.15

Oysters, Clams, Mussels and Shell Fsh.

Cape Cod shell oysters, per barrel	8.50
Malpeque sheel oysters, selected, C.C.I., per barrel	12.00
Marpeque shell oysters, selected J.A.P., per barrel	10.00
Malpeque shell oysters, selected XXX, per barrel	9.00
Malpeque shell oysters, ordinary, per barrel . .	8.00
Malpeque shell oysters, caraquets, per barrel . .	5.00
Clams, per barrel	9.00
Mussels, per barrel	6.00
Live Lobsters, medium and large, per lb. . . .	.38
Boiled Lobsters, medium and large, per lb. . .	.40

Who's Who in the Fishing World

It is surprising to note the number of able men who have come out into the world from insignificant and little known places. Nowadays, a man's success seems to be assured if he has had the good fortune to have been born in the country. Those of us who have honored some large city as a birth-place have but a poor foundation for commencing an autobiography in after life. It always tells against us.

Who ever heard of a trust magnate, president, millionaire, or prominent public man boasting of having been born and educated in a city? No! they were all "raised" on a farm; educated in the local schoolhouse, and migrated to the city while yet unsophisticated to cut their mark on the world. In this fact, some scientist has an admirable subject for study, and in the near future we may have it all explained to us that the environment of fields, cows, milk and new mown hay has a tendency to develop braininess in the rustic youth contrary to the popular belief.

Mr. William A. Found, the subject of our sketch this month, was born in the country at Found's Mills, Prince Edward Island. In addition to claiming the "Island" as his birth-place, Mr. Found first saw the light at a congenial period—Christmas Eve, 1873—so that our "Who's Who" can kill two birds with the one stone by celebrating Christmas and his birthday at one and the same time.

The patriotic "Islander" always refers to that province as the "Island"—what other Island is there but Prince Edward Island anyway?—and the spirit which burns in their breasts has given to Canada a breed of men who retain their inherited singleness of purpose and loyalty to the line of endeavour they take up in later life. Mr. Found has all of the Island attributes. He is a quiet, unassuming man, but as Superintendent of the Dominion Fisheries he is intensely loyal to his work and patriotically optimistic as to the future of the Canadian fisheries.

Like many other able men who have "made good," he received his primary education at his home school, from which he entered on a college course at the Prince of Wales College at Charlottetown. Graduating from that institution in 1891, he engaged in school teaching, and successively held the principalship of schools in his home town and at Hampton, P.E.I. In the Fall of 1897, he gave up teaching and early in the following year accepted a junior position in the Fisheries Branch of the Department of Marine and Fisheries at Ottawa. By dint of hard, persevering work, he rose rapidly in the service, and in April 1911, when the position became vacant, he was appointed Superintendent of Fisheries.

Having been brought up in an environment of fishing, Mr. Found is a singularly competent authority upon many branches of our resources in this line. As a boy, he spent many days at sea with the Island fishermen hauling trawls and lobster pots while the vast oyster beds around the Island afforded him an opportunity to study the bivalve at first hand. While engaged in scholastic work, Mr. Found devoted a great deal of his spare time to studying the fisheries in his vicinity, and the numerous articles from his pen upon the oyster and lobster fisheries can be taken as standards from both a practical and scientific point of view. His knowledge and experience of the fisheries, combined with his studies on the subject of fish culture, admirably fit him for the position which he holds as Superintendent of Fisheries.

TRADE ENQUIRIES.

Opportunities for Canadian Firms.

The following were among the enquiries relating to Canadian trade received at the office of the High Commissioner for Canada, 17 Victoria Street, London, S. W., during the week ended January 30, 1914:—

A Liverpool firm make enquiry for the addresses of reliable packers of sardines in Canada.

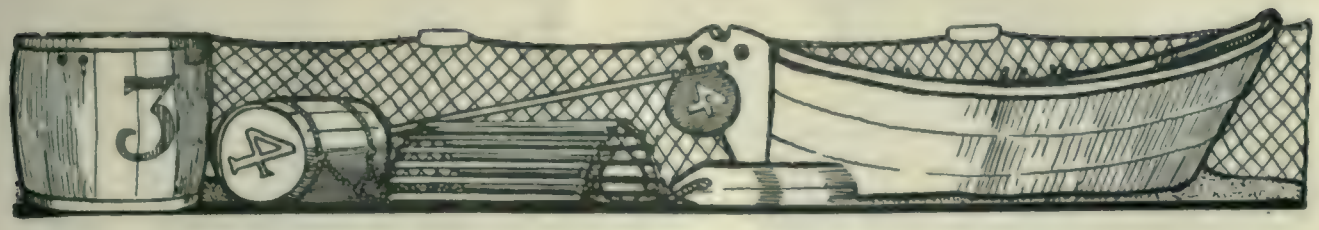
NEW FISHING REGULATIONS BETWEEN U.S. AND CANADA.

Washington, February 27.—The Senate late to-day passed a Bill to put into effect January 1, 1915, the fishing regulations recommended by the joint fishing commission of the United States and Canada for boundary waters. The Canadian Government approved the regulations about three years ago.

In the Senate the Bill was amended so as to make the regulations applicable to Saginaw Bay, hitherto excluded.

PERSONAL.

Amongst the vistors to Vancouver of late has been Mr. H. B. Short, of Digby, N.S. The trade all over Canada looks upon Mr. Short as the "father of Haddies," and wherever he goes both he and his haddies are equally welcome. Mr. Short is not on a business trip, but merely on his way to California, the winter Mecca of those who have made good.



THE ATLANTIC FISHERIES

GOOD WORDS FOR THE CANADIAN FISHERMAN.

"I received the "Canadian Fisherman," and was much pleased with it. Think it will certainly keep all fishermen posted." Mr. William Carrick, Fort Erie, Ont.

"I am well pleased with copy of your paper, and think you are working along right lines. See no reason why you should not make a success. I am enclosing subscription as I do not want to miss one number." Mr. H. R. L. Bill, Lockeport, N.S.

"I have received the "Canadian Fisherman." It appears to me to be just what our fishermen want, as it makes very interesting and instructive reading." Mr. J. Burton Cook, Seal Cove, Grand Manan, N.B.

"A friend of mine liked the "Canadian Fisherman" so well, that he wants me to send in his name for one year's subscription." Mr. M. B. Green, Grand Harbor, Grand Manan, N.B.

CANSO, N.S.

(From Our Special Correspondent.)

The Maritime Fish Corporation began filling their ice-houses early and were fortunate in securing good clear ice averaging about 12 inches thick. Matthews and Scott, who supply many Gloucester and Nova Scotian fishing schooners throughout the year, and are the largest handlers of this commodity in Canso, stocked up their shore houses during the cold snap in January. During the fall their buildings wer equipped with an up-to-date steam hoisting gear which is effecting a great improvement in time-saving and efficiency.

There promises to be an addition of at least one to the number of fish buyers operating at Canso during the coming season. The long-established firm of Portland Packing Co., who have bought and packed lobsters here for many years, will be in the field for live fish in future. They have recently fitted up one of their buildings for the storing of ice, and are now busily at work stocking it up. Needless to say the fishermen are now kicking at the prospect of more buyers.

DIGBY, N.S.

(From Our Special Correspondent.)

The past month will go down in history as the coldest and roughest February for Digby county fishermen, for more than twenty years. Our lobster fishery is almost a total failure, owing to loss of traps and gear, as well as the scarcity of the lobsters. One Briar Island fisherman pulled one hundred and twenty traps, from which he received six lobsters. Another party pulled one hundred and sixteen traps, and counted out three. The third boat pulled thirty traps, and its two occupants returned home as they left, without one count lobster. Another better proof of the great shortage is taken from the Insular Steamships Co.'s freight books. This company's steamer Westport III., carries practically all the exported lobsters from Sandy Cove to Westport, a distance of 20 miles, or taking in both Bays, 40 miles, of good fishing grounds. The manager of this company reports that n the month of January, 1913, they carried 362 crates of lobsters to Yarmouth. And this year, the corresponding month, they only carried 222 crates, a shortage of 140 crates, and out of this total only 91 crates were what are called large lobsters, 10-inch, or over. In comparing any of the above figures with the company's books, say fifteen or twenty years ago, almost any one would be convinced that this great industry is about to a finish.

If one could obtain a story of the actual doings on board the Digby fleet, during the month of February, many rough stories and narrow escapes from death could be told. The schooner Dorothy W. Smart, owned by the Maritime Fish Corporation, one of the best vessels in our fleet, commanded by Capt. William Snow, Digby's high-line skipper, for the season's haddock fishery, left Digby Monday afternoon, February 16th, for the fishery grounds. During the night a south-east gale followed by a northern with snow, caused the biggest sea in the Bay of Fundy ever witnessed by the keeper of Point Prim Light. Anxious wives and mothers awaited news from the "Smart." The next morning when the vapor lifted "Capt. Bill" was anchored in the harbor at Westport, Briar Island, as if nothing had happened. Skipper and crew did not even think it necessary to row ashore and phone their Digby friends that they had lived through a terrible night's experience, and were safe at anchor.

In the meantime, the schooner Albert J. Lutz, Capt. Arthur Longinue, had got into Shelburne, and the rest of the fleet were at Briar Island and Yarmouth. The following are the receipts of fresh fish as reported by the different firms for the month of February:—Maritime Fish Corporation, 148,701 lbs. of haddock, 20,439 lbs. of cod, 3,164 lbs. of hake, 11,600 lbs. of cusk, 2,245 lbs. of shack, 258 lbs. of halibut. Joseph E. Snow, 108,775 lbs. of haddock, 13,200 lbs. of cod, 10,400 lbs. of cusk. D. Sproule & Co., 14,000 lbs. of haddock, 14,881 lbs. of mixed fish. Nova Scotia Fish Co., 35,000 lbs. of haddock and 4,000 lbs. of cod.

Owing to the rough weather, the Digby branch of the Maritime Fish Corporation had no fish receipts to report during the last week in February up to and including the 26th inst., something unknown in the history of the firm. All the other local wholesale fish firms have also reported no receipts for the same week.

Lobsters are very scarce in the Annapolis Basin this season, only 20 crates were shipped during January.

A large market exists for Annapolis Basin clams, and

the local clam diggers shipped 334 barrels during January 1st to February 5th.

After a long spell of unseasonable fishing weather with fish scarce for the Lenten market, three vessels of the Digby fleet, "Lutz," "Smart" and "Snow," arrived in on March 2nd with an aggregate fare of over 240,000 lbs. of fresh fish. The arrivals have come in time to fill long standing orders.

LUNENBURG, N.S.

(From Our Special Correspondent.)

There is very little of interest to report about the doings of the fishing fleet during the past month. All the fish held by the producers have now been sold, the last cargo having been disposed of to Halifax parties at about $7.00 for cod and $3.75 for hake, which, considering the position of the consuming markets is an extreme price.

The masters of the fishing fleet are now engaged looking up crews, etc., for next season, the outlook for obtaining men now being very good owing to the high prices ruling during the past season, and the opening of the American markets to our fishermen.

The stocks of dry fish in the town are much smaller than usually held at this time of the year, the total quantity held by shippers being about between 15,000 and 18,000 qntls., which should be barely sufficient to last until the new fish are again on the market. Thus the outlook for the next season is very encouraging. The probabilities are that the fleet will be about the same in number as last year, with possibly a few vessels added, as the ship-yards in the town and county are kept busy, while some of their out-turn goes to replace vessels that have been sold or lost at sea.

NEW BRUNSWICK NOTES.

(From Our Special Correspondent.)

Connors Bros. of Black's Harbor, are applying for permission to increase their capital from $48,000 to $250,000. This concern, besides carrying on a large fish business, operate a coastwise steamship service, and a large lumber business. They ship their special brands of cured fish to many parts of Canada and Europe, and have even made considerable shipments to Australia and New Zealand. It is rumored that they propose to establish a cold storage plant in connection with their fish business, but just what their plans are has not been made public.

While during the first part of the season the lobster fishermen on the shore of St. John and Charlotte county did very well, owing to high prices, latterly they have been playing in hard luck. Not for forty years has the weather been so severe in this district as it has since the middle of January. Heavy gales and bitter cold have made fishing impossible on most days, and when the fishermen have dared to venture out, the catches have been small.

A subsidiary salmon hatchery has been erected by the Dominion Fisheries Department at Nepisquit, one mile below Grand Falls, for the purpose of stocking the Nepisquit River. It will accommodate 1,000,000 eggs, but will only be operated for a few months in the year. The eggs for it will be brought to the eye stage in Restigouche hatchery and transferred when they are well advanced towards the end of March, or early in April. Owing to the proximity of this hatchery to the spawning grounds, the majority of the fry can be distributed directly in suitable waters, as they will be in the distributing cans for only a short time.

Considerable interest is now being manifested in the question of developing the oyster industry of the Province. Premier Flemming, who has given the matter a good deal of attention, plans at the first opportunity to pay a visit to the oyster growing districts on some parts of the American coast with a view to studying conditions at first hand, and getting pointers on the problem of encouraging the industry in this province. The oyster fisheries of New Brunswick have not in the past received much attention in the way of systematic planning for their conservation and development. In 1886 New Brunswick's production of oysters was 28,083 barrels, the highest yield on record. From then the production gradually declined till in 1903 it was placed at 12,470 barrels. Since that year the production has slowly increased, though the industry has not been given much care. In 1910 the production was 14,045 barrels, distributed as follows:— Bathurst 100 bbls.; Caraquet 300; Shippegan 40; Tracadie 30; Nequae 2,800; Bay du Vin 3,800; Chatham 420; Richibucto 300; Buctouche 3,240; Cocagne 2,200; Shediac 400; Botsford 350; Sackville 60.

It is not so long ago that oysters in New Brunswick were burned to obtain the lime in their shells, and mud digging machines were used to raise the material of the oyster beds, which the farmers considered very valuable as a fertilizer for their land. In the face of such wanton destruction and reckless fishing, pollution of the waters and destruction of the young, it is surprising that New Brunswick has continued to be a producer of oysters on the scale it has. Many areas which were formerly prolific are now barren, and the production has only been kept up at all by the discovery and exploitation of new beds.

One reason why the public authorities have been slow to take up the matter of oyster culture, has been the dispute between the Dominion and Provincial Government as to which had the right to issue leases; another has been the opposition of the fishermen to the idea of leasing areas to any body. A year or so ago the dispute between the governments was settled in favor of the Province, and Mr. Flemming's Government has tackled the problem of encouraging the industry. His government does not intend to rouse the opposition of fishermen by trying to lease areas at present productive, but it has passed an act providing for the leasing of barren bottoms on certain sections of the coast to companies or individuals who will enter into obligations to establish and plant oyster beds, and after an interval of seven years pay the province a royalty on the production. Two large companies have already taken leases of barren areas on this understanding, and there is every reason to believe that other companies will be formed to take up such leases. With artificial culture of private beds and better protection of the public beds, the oyster industry of the province should attain to considerable proportions in the near future, and become a source of revenue to the government as well as of profit to the parties engaged in it.

The possibilities of this industry are indicated by the fact that Canada imports nearly half a million dollars' worth of oysters annually. At present prices oysters are a luxury. With the lower prices which increased production would make possible, the consumption would greatly increase. It is estimated that St. John city at one time consumed between 10,000 and 12,000

barrels of oysters a year, mostly native production, but now the bulk of the oysters consumed there is imported from the States, and owing to high prices, the consumption is not large.

ST. JOHN, N.B.

(From Our Special Correspondent.)

Owing to the heavy winter weather of the past month there has been little fresh fish on the local market, except what was secured from cold storage. This fact, combined with small stocks, sent up the price of salt fish a little about the middle of the month of February. All winter prices of salt stock has been firm, and there appears little prospect of easier prices.

Simeon Armstrong recently made application to the city council for the exclusive privileges of fishing eels in certain portions of the harbor. Mr. Armstrong planned on establishing a plant of considerable size to prepare smoked eels. In Germany and parts of the United States, catching and curing eels is a rather important business, and the prices received for this article are high, and have been advancing in recent years. However, the city declined to give Mr. Armstrong the exclusive privilege asked for, though the fishermen do not systematically exploit this fishery.

Prof. W. F. Ganong recently read a paper on the Economic Mollusca of New Brunswick before a meeting of the St. John Natural History Society. He pointed out that the mussel has a higher nutritive value than the clam, and said that in some respects both are superior to the oyster. He set forth the order of the uses of shell fish as follows: (1) Use as food for man; (2) as bait in the fisheries; (3) as fertilizers for land; (4) for ornaments including the production of pearls; (5) for making of dyes; (6) for dishes and other minor uses.

It is said that in the lobster palaces in American cities they have begun to serve mussel cocktails, while learned scientists are pointing out the high importance of mussels in the battle with the high cost of living.

Wholesale quotations here are:

Large dry cod	$0.00	to	$6.75
Medium dry cod	6.25	to	6.75
Small dry cod	4.75	to	5.00
Pollock	0.00	to	3.75
Grand Manan herrings, bbls.	5.00	to	5.25
Grand Manan herrings, half-bbls.	0.00	to	3.00
Pickled Shad, half-bbls.	8.00	to	12.00
Bloater, per box	0.80	to	0.90
Kippered herring, per dozen	0.00	to	0.90
Halibut, per lb.	0.10	to	0.15
Finnan haddies, per lb.	0.06	to	0.07
Swordfish, per lb.	0.12	to	0.15
Fresh cod, per lb.	0.03½	to	0.04
Fresh haddock, per lb.	0.03½	to	0.04

YARMOUTH, N.S.

(From Our Special Correspondent.)

There has been very little doing during the past four weeks in the fish business here. It has been an excessively stormy period and this, combined with intense frost, has effectually tied up the business. There has been an extra large export business done as all sections of the coast have not been subjected to the weather that we have had. Lobster fishing has kept up remarkably well, but the scene of active operations has changed from our immediate coast to the more sheltered waters around Tusket Islands and along St. Mary's Bay. However, it was expected that February and March would be two comparatively dull months, particularly in the fresh fish business, so no one is disappointed. This has been a busy month in one way, though, that is preparing for the future. An immense quantity of ice of splendid quality has been

Gateway Fish Company's Wharf, Yarmouth, N.S.

or is being harvested, and every available building which can be used for the storage of ice has been filled. The old antiquated way of harvesting this crop has been superseded this season by modern methods, and now as much can be obtained in a week as used to be secured in the season.

For a week or so past this harbor has been practically closed to fishing vessels on account of the ice, the harbor having been frozen over for the first time in twenty-six years. The American schooner Squanto arrived in port on the tenth after having been at the mercy of the wind and seas for three weeks. A few hours after arriving she was caught by the frost, and was not broken out before the twentieth.

This period of time referred to was particularly hard on the fishermen and their families, who are occupying the outlying islands for the lobster season. As a general thing they do not keep very much in the way of stores on hand, as it is usually an easy thing to replenish the stock. This prolonged cold spell, however, caught them unprepared, and on many of the islands coal and provisions ran short. The steamer "Percy Cann," from Yarmouth, was the first vessel to appear on the scene. On the 11th, as this little vessel was trying her best to force her way through the thick ice, which surrounded her in all directions, she saw a signal flying from the outer Bald Island. Going as close in as they dared they found three fishermen, all belonging to Wedgeport, who had been on that exposed spot for almost two weeks with provisions for only a few days. They were taken off and conveyed to a place of safety. On the same day another signal took them to Spectacle Island, where supplies had run short, and she was able to relieve them. Stormy as the month has been, there have been no casualties to speak of. One or two boats have been damaged but none lost, a little lobster gear destroyed, but not much of that, as the most damage in that line had been done the month previous during the gale in which the "Cobequid" was wrecked, and no new gear had been got down—so the fishermen, as far as material losses are concerned, have got off comparatively easy. Of course, there has been a lot of time lost, but there always is at this season, and time in the fish business is a commodity which is hard to figure. Still, in spite of all the drawbacks, the exports for the month were:—

Live lobsters, crates	2,150
Boneless Fish, boxes	4,377
Pickled Fish, crates	168
Salt Mackerel, barrels	120
Fresh Fish, cases (500 lbs. each)	880
Halibut, cases	6
Fish Waste, barrels	262
Finnan Haddies, boxes	371
Clams, barrels	397

Fishing Vessels Discharging at Yarmouth, N.S.

Dry Salt Fish, drums	3,316
Dry Salt Fish, boxes	116
Salt Herring, barrels	111
Smelts, boxes	594
Eels, barrels	27
Canned Lobster, cases	247
Hake Sounds, bags	10
Fresh Salmon, boxes	1
Bloaters, boxes	750
Cod Fillets, boxes	10
To London:	
Canned Lobster, cases	403
To Hamburg:	
Canned Lobster, cases	36
To Havana:	
Dry Salt Fish, drums	110

The only unusual feature in the above list of exports is the "1 case Fresh Salmon"—the first fresh salmon to be exported from Nova Scotia this year. As pointed out before, lobsters are keeping up remarkably well, and when it is considered that the average price has been $38 for large and $27 and $28 for mediums, it can easily be seen what a temptation it is for the fishermen to risk their lives day after day in the pursuit of this toothsome luxury.

For the same period, the following fresh fish fares only have been entered inwards:—

Jan. 21—Schr. Loran B. Snow.	8,000
Jan. 21—Schr. Dorothy G. Snow	5,000
Jan. 21—Schr. Cassie Belle	15,000
Jan. 24—Schr. Dorothy G. Snow	15,000
Jan. 24—Schr. Loran B. Snow	8,000
Jan. 24—Schr. Angie B. Watson (Am.) . .	8,000
Feb. 20—Schr. Albert J. Lutz	25,000

As intimated in my last letter, The Consumers' Fish and Cold Storage Company have opened a branch in Shelburne. It is in charge of Captain John Hipson, and had already turned quite a lot of business this way. In fact, had it not been for the Lockeport and Shelburne branches of the company the fresh fish exports at this port would have been woefully small.

The annual statistics of the lives and vessels lost in the Gloucester fleet has been published during the last month. As usual, the majority of lives lost are sons of Nova Scotia, and Yarmouth county comes in for more than its proportionate share. Of the twenty-six lives lost, five of them belonged to this county, as follows.

Remi Doucette, 45 years old, of Tusket, leaving several grown-up children.

Captain Vincent Nelson, 50 years old, of Pubnico, left widow and five adult sons.

Leslie Fletcher, 27 years old, of Argyle, single.

Ross Worthen, 24 years old, of Pubnico, single.

Reuben Kenny, 62 years old, of Glenwood, single.

In a week or two now the vessels will go home and outfit with heavier gear for halibut fishing, which generally starts in March. A few weeks now will make a lot of difference in all branches of the fishing industry. It will not be long before the boat fishermen commence to get their small crafts ready and old Yarmouth is preparing for a busy season, once it opens up in full swing.

PRINCE EDWARD ISLAND.

(From Our Special Correspondent.)

The Smelt-fishing season in Prince Edward Island closed on February 15th with an estimated output of about 2,700,000 pounds and totalling a net yield to the fishermen of about $75,000.

For the most part this branch of the fishing industry is carried on by farmers and farmers' sons, whose homes are in the vicinity of the principal fishing streams. Flowing into Charlottetown Harbor, through some of the finest farming sections in the province, are three rivers, the West, North and East Rivers, each of which yields a large annual harvest to those who, during the winter months, care to take up the business. The product of these rivers is confined to oysters and alewives in autumn and summer, and smelts and eels in the winter, each, however, providing its share of excellent angling for summer tourists and holiday makers. The commercial feature is not sufficiently prominent or continuous to support any considerable number of fishermen and for this reason advantage is taken by the farmers, during the otherwise unoccupied winter days of exploiting the schools of smelts which yearly seek the headwaters of the rivers. Many of these make good money at the business, one of them, to the knowledge of the writer, receiving from a Charlottetown dealer a few days ago $400.00 for smelts caught during the season, at the foot of his farm on West River.

The rivers converging in Charlottetown harbor are by no means the only haunts of the smelts in this province. At the east end of the Island, in the Montague, Cardigan and Murray Rivers; on the north in the Morell, New Loneon and French Rivers; Richmond, and Cascumpec Bays and on the South in the Dunk and Wilmot Rivers, Bedeque and Egmont Bays, and many other larger and smaller streams, quantities of these excellent fish are taken every year, affording a profitable side line to many who would otherwise be practically idle during the winter. The quantity of smelts taken this year was considerably in excess of that of former years, although beginning somewhat later than usual, owing to the mildness of the early winter. The excess is due to the fact that more people were engaged in it than in former years, rather than to any noticeable increase either in the quantity or quality of the fish.

Oyster Business.

In fishing and commercial circles, at present the chief topic of discussion is the oyster business, and extensive preparations are being made for next summer. Two of the largest companies incorporated a year ago, and which began operations last summer, have held their annual meeting and report exceedingly promising prospects. It is expected that the companies now under way will add very largely to their cultivated areas during the coming summer and that several other companies, now in process of formation, will take up areas in Richmond Bay and possibly St. Peters Bay.

St. Peter's Bay offers unique opportunities for biological study. The Bay is an arm of the sea extending inland a distance of about ten miles. It is of average width of about a mile and flowing into it are a few streams, the largest of which is the Morell River. A curious feature of the bay is the fact that it is a dead oyster bed. Throughout its whole extent not a live oyster has been found within the memory of people now living, yet the whole bay is a bed of oyster shells ranging in depth from ten to forty feet. It is evident that through long ages, oysters grew and multiplied, until they reached the surface of the water, where life was no longer possible. They filled the bay, leaving no room for succeeding generations.

There is a theory, unsupported by proof, held by many who claim to know, that oyster beds which have ceased to produce live oysters, as St. Peter's Bay has, have developed a condition in which oyster life is impossible, just as a culture, in which disease germs are permitted to exhaust the elements on which they live, finally becomes fatal to the disease produced by the germs. According to this theory, the cultivation of oysters in St. Peter's Bay would be impossible. It is a study for the biologists, and experiments now in progress in oyster culture may throw some light on the subject.

THE PACIFIC FISHERIES

GOOD-BYE DORIES.

The Canadian Fish and Cold Storage Co., who operate and own the largest cold storage plant on the Pacific Coast, and even in Canada, are now convinced that fishing for halibut can be done without dories. Fishing is done direct from the steamers now, this being tried successfully with the above company's boats "James Carruthers" and "Andrew Kelly."

That this method is successful is proved by the fact that the former arrived after a ten days trip with 120,000, and the latter 90,000 lbs. for eighteen days' work. The great feature of the "dory-less' fishing is the fact that fishing can be done in all weathers.

As soon as the necessary gear arrives from England, the company proposes to convert their other boats in the same way as the above two. Naturally, it is only possible to fish this way with vessels having other power than sails, but as all vessels fishing for halibut on the Pacific have either steam or "kickers," it looks as if the old familiar dory will soon be a thing of the past.

CANNED SALMON.

Sockeyes (Talls)	per case	$6.50
Sockeyes (Flats)	per case	7.00
Sockeyes (Flats), halves	per case	8.25
Cohoes (Talls)	per case	4.25
Cohoes (Halves)	per case	6.50
Pinks (Talls)	per case	2.75
Pinks (Halves)	per case	4.00

Sockeyes firm and rise looked for in less than 30 days, the flats are all pretty well cleaned out.

Cohoes Talls are holding fair, but the Halves are getting thinned out.

Pink Talls scarce, but Halves are in fair supply.

English buyers are already enquiring for 1914 Sockeye Salmon and offering prices considerably higher than last season. But as yet little of this business has been done, as packers prefer to wait until the season is more advanced.

The carry over of this season is very small, even on the standard cheaper grades. Some cheaper grades under standard are offering at considerably low prices.

HALIBUT.

At the present writing it is an utter impossibility to say exactly what the situation will be at the time that the March issue of the "Canadian Fisherman" comes out. Buyers in Eastern Canada and the States are under the impression that the fresh supplies now coming in, will cause a very big drop in the price of the frozen goods, and that holders in B.C. will get caught to a certain extent. It is true that an abnormal supply of fresh Halibut has been coming along these past few weeks. The situation is altogether different to that of this time last year. Then the strike was on both at Seattle and also Vancouver; this meant that the frozen fish had big demands.

But holders of Frozen Halibut in B.C. are by no means anxious nor are they willing to let go their fish at any figure but at a profit. So far the weather on the banks has been most mild and favorable, so much so in fact, that it is tempting Providence to figure on such weather holding. Bad weather is looked for on the Pacific, and we always get it. That it did not come at the time it usually does is no indication that it will not come at all. Lent will be on us in a very few days, and with Lent comes a demand for all fish. We are bound to get our share of "blows" and dirty weather on this coast, and when we do get it, there is no mistake about it.

At any time now we look to see the fresh stocks offering drop down to almost nothing. This is where the frozen goods will come in. We venture with all confidence to say that by the first week or so of Lent the frozen halibut market will be pretty firm, especially as the bulk of the fish is held by those who can afford to wait.

SALMON.

A few "Springs" are offering and being eagerly snatched up for local consumption, fetching good prices. Stocks of frozen salmon are by no means large. Owing to the fact that some markets will handle only the "round" fish and others the "dressed," it looks as if it will be difficult to fill orders for straight cars of the one and the other. About the only frozen salmon held are the Qualla, Cohoes and Steelheads. There are more Cohoes than of the other two combined; in fact if there is very much more than a car of Steelheads taken altogether, we would be surprised.

FREE BAIT PROPOSED AT PRINCE RUPERT, B.C.

The consensus of opinion at Prince Rupert is that by providing all fishing boats with free bait, will do a great deal towards making that port a great fishing centre. The unique geographical position of Prince Rupert will allow for this better than any other port on the Pacific Coast.

By allowing the American fishermen to call in at this port and get free bait will encourage them to buy their other supplies and so develop such trade that always goes hand in hand with such industries. It will also encourage them to land their catches at this port and ship in bond through to their markets, instead of the long trip to the Sound cities.

Mr. H. S. Clements, M.P. for Comox-Atlin, is taking up the matter with Ottawa, and anticipates no difficulty in getting the Department to recognize the advisability of such a step.

B.C. FISHERIES LIMITED.

The affairs of this company are not yet straightened out. Many rumors are around concerning the future operations of the B.C. Fisheries Ltd., some of them going so far as to say that it will amalgamate with another company at present being reorganized. There have been several meetings in London, but so far the stock-holders do not seem to have accepted any of the suggestions made to them. At all events it does not look as if operations would be continued this coming season.

It is to be hoped that some arrangement will be arrived at whereby the large and expensive plants erected on the Queen Charlotte Islands, will be operated again. One would like to see the trawlers of the B.C. Fisheries moved from their present quarters in Vancouver. We like to see everything here looking prosperous, and these little steamers do not have this appearance.

HERRING.

The season for catching these fish except for bait purposes is about over. Statistics as to the quantity shipped "dry salted" to the Orient are not yet to hand. But it is understood that the market was not a very good one this year. China has troubles of her own in addition to that one the rest of the world has felt of late, i.e., money tightness. But when that country does begin to get on her feet, those in the fishing industry in every branch will find a very large market there. A Chinaman is very fond of fish, but prepares it in the same way that he does everything, opposite to everyone else.

GENERAL NOTES.

In California of late there seems to be a similar rush to get into something "good," just the same as all those of this country who saw people getting rich off "fox farms." But California is not after foxes, but something that we all have seen, and many times wished elsewhere when our propellors have run foul of it. I refer to the common kelp. Good kelp beds are all pretty well staked now in California, and of late there have been men looking around British Columbia to find if our variety contained equal qualities.

Companies are being formed, it is reported, for the gathering of Kelp, and for extracting from it the different valuable properties it hides. Provided that the right sort of Kelp is obtained, it is claimed that not a single particle of the kelp is wasted in getting the extracts from it. Potash, glues and a substitute of equal qualities as rubber, can all be extracted from kelp. It is claimed that American leather and linoleum may be manufactured and sold at a very much cheaper price than at present. The foundation of these much used goods only need to be covered with a product extracted from kelp, to make it flexible, and wear well.

VANCOUVER WHOLESALE FISH MARKETS.

Fresh Fish.

	Per lb.
Salmon (Spring)	.12
Salmon (White Spring)	.06
Halibut	.06
Cod	.05
Smelts	.06
Herring	.03
Soles	.06
Flounders	.03
Whiting	.04
Oolachans	.05
Skate	.03
Perch	.06
Rock Cod	.04
Red Cod	.04
Sea Bass	.06
Black Cod	.08

Frozen Fish.

	Per lb.
Salmon Cohoes, dressed, heads off	.07
Round	.06
Salmon, Qualla, dressed, heads off	.05
Salmon, Steelheads, dressed, heads off	.10
Round	.09½
Cod	.05
Halibut	.06
Smelts	.06
Oolachans	.06
Soles	.05
Flounders	.03
Perch	.06
Herring	.03
Black Cod	.08
Shad	.08
Shad Roe (per pair)	.20
Whiting	.03

Smoked Fish.

	Per lb.
Salmon	.10—15
Halibut	.12
Cod	.08
Finnan Haddies	.09
Kippers and Bloaters	.06
Kippered Salmon	.12

Shell Fish.

Crabs (deep sea)	per doz.	$1.00
Shrimps (local)	per lb.	.12—16
Clams	per lb.	.03
Olympia Oysters	per gall.	3.25
Eastern Oysters	per gall.	4.00

Reported London Fish Market.

EXTEND WINTER FISHING.

Ottawa, Feb. 22. — An Order-in-Council has been passed extending for two weeks, the period in which winter fishing is allowed in Alberta and Saskatchewan. The period of extension is from February 15 to the end of the month.

FISHING SUPPLIES.

Fishermen can secure the best quality of fishing supplies from the John Leckie Company, Toronto, at all times. The Company keep a large and varied stock always on hand, and can fill orders, large or small, promptly. Besides the regular netting and fishing lines, they carry a full stock of deck fittings—anchors, lamps, chocks, manilla and wire rope rigging, blocks, etc., also a full line of English Compasses, Logs and Barometers. "Everything for the Fishermen and Catching Fish" is the motto of the Company.

PACIFIC COAST OPPORTUNITIES.

To the men who know the sardine packing industry and similar branches of the fish canning trade, and who have the money to invest, British Columbia offers a particularly bright and promising field for successfull operation. There is scarcely a beginning made in the way of commercially exploiting the many varieties of fish which abound in the waters of the North Pacific Coast.

Vast shoals of herring run for months every year in a hundred bays and inlets along the thousand miles of British Columbia's sheltered sea-coast. People living in British Columbia are familiar with the fact that herring teem in shoals in Nanaimo Harbor, Pender Harbor, Prince Rupert Harbor, Quatsino Sound, and many other harbors and bays along the coast from the Fraser River to Alaska. It is a matter that no longer excites more than passing comment, that every year thousands of tons of herring are swept in by the tides to be left stranded and dying on the shores of a hundred bays. The fact that this is a great waste of economic opportunity does not seem to have made any impression.

By a strange irony of fate, while this condition of waste goes on year by year on the Pacific Coast, at the same time, on the Atlantic Coast of America, where for generations the herring fisheries and the sardine-packing and other allied fish industries have been the support of a large population, the run of this valuable fish has so fallen off that to-day there are many sardine canneries on the New England coast shut down, and many men of large experience and with ample capital to handle the industry on a large scale, have no opening there for either experience or capital in the line they are familiar with.

Discussing the subject, Mr. B. Frost of 429 Pender Street, a gentleman who has had long experience in various branches of the fishing and fish-packing industry, gives it as his firm conviction that there are many men of means and capability and experience on the Atlantic Coast who would gladly seize the splendid opportunity in British Columbia, if they knew of them. It would not be long until capital to put up not one, but a dozen, canneries, would be forthcoming, and the packing of sardines, herring, clams, crabs and other varieties of fish would become a large factor in the production of the province from the natural wealth of its sea fisheries.

The great trouble seems to be lack of information on this important matter. Salmon packing seems to appeal to the local people interest in fishing. There is no lack of capital for carrying on salmon canning.

Yet, as Mr. Frost points out, the salmon run for a comparatively short season every year, and then the salmon cannery is shut down for the remainder of the year. On the other hand, herring can be caught all the year round along the entire coast, the heavy run of course being in the winter months. With that as a basis, and with the handling of clams, crabs and other fish, cannery operations can be carried on the year round, making a much more satisfactory industry, and one in which many more people can find a regular means of livelihood.

So far the packing of sardines is practically an untried industry. The herring which are caught in large quantities are mainly used as bait in the halibut fisheries. For this purpose only the large fish are required. Nothing is done with the small fish caught. The canneries on the Atlantic Coast are familiar with the condition of going a hundred miles for their supply of fresh fish, and of late even that source has failed to a great extent. The wonder is that British Columbia has not had a widespread movement to attract attention to the vast resources of its coast fisheries other than salmon and halibut.

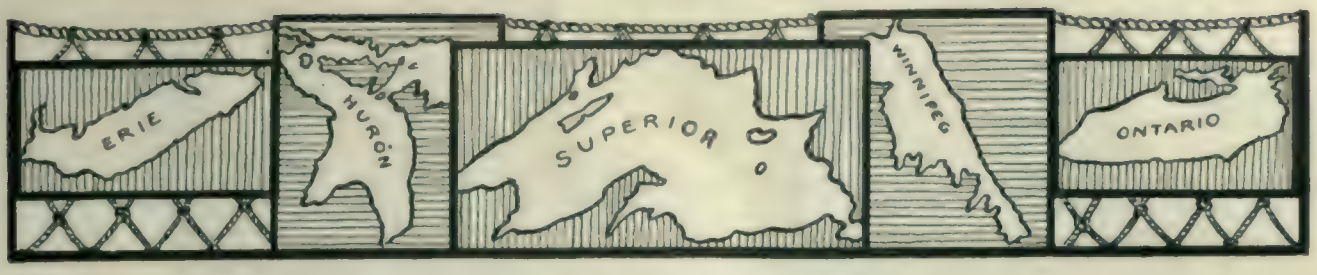
As to cost of production of sardines and other lines of canned fish not now put up in British Columbia, Mr. Frost has paid a good deal of attention to present conditions. He points out that the herring are so plentiful, that they can be bought a great deal cheaper than on the Atlantic Coast. The cost of operating a factory need be no greater than on the Atlantic Coast for the simple reason that everything is here to hand for the work. The fish supply can be got within a hundred yards of where a cannery could be erected. While the legal herring season on the Atlantic Coast runs from April 15 to December 15, now the run never exceeds two months, small as it is. In British Columbia the small herring can be caught all the year round. The heaviest herring run is in the months of December and January, though the big run really starts in September and continues until late in the spring.

The day of making the cans at the cannery has passed with the establishment of large can-making plants, which effect an economy of fully $2.00 per thousand in cost of cans, no small item in a year. The American Can Company has factories on the Pacific Coast just as it has on the Atlantic.

The market for sardines and other canned fish products is good on the Pacific Coast and in the Canadian Northwest. The local demand is as good as anywhere else in Canada or the United States. The shipping facilities for reaching any market are excellent, and for the nearer markets of the Canadian Northwest and the Northwestern States, there is an advantage in freight rates over shipments from the East. That the market in Seattle, San Francisco and other points in the Pacific States is open follows from the fact there is no duty on these goods entering the United States. Right at the beginning, what with direct local market, the Canadian Northwest and the Northwestern States, the output of three or four factories would find ready sale, even without reaching for the large markets of export.

FISH-EATING COMPULSORY.

Fish-eating, which has found such a strong advocate in Sir James Crichton-Browne, was at one time compulsory by law on at least two days in every week. In 1593 Queen Elizabeth's Privy Council issued a mandate ordaining that it should "not be lawful for any person within that realm to eat any flesh upon any days observed as fish-days, upon pain of forfeit of $15 (equal to about $150 at the present day) for every time he offended," and, further, that "no inn-holder, alehouse-keeper, or common table-keeper shall utter or put on sale upon a fish-day any kind of flesh victuals upon pain of forfeiture of $25." This Act was prompted by the fact that the fishing industry, which provided the nucleus of her Majesty's Navy, both in the matter of men and of vessels was suffering so severely by the growing indulgence of the people in beef and mutton that many of the fisherfolk were abandoning the trade. This the Privy Council rightly judged to be a danger to the realm.



THE LAKE FISHERIES

FISHERY RESOURCES OF NORTHERN LAKES.

A gentleman recently returned from a survey of the northern portion of Ontario, has supplied the Editor of the "Canadian Fisherman" with the following interesting information regarding the fishery possibilities of the waters traversed by him.

"Our trip, via the water route, took us from Le Pas due east to a point north of Norway House on the Nelson River, thence north and due west again to a point further north of Le Pas. The distance covered by water was 1,123 miles. The route was roughly as follows:—Ls Pas down the Saskatchewan, up the Muddy and Frog Rivers, through Little and Great Comorant Lakes, up the Pickerel, again through the Frog River, across and covering Moose Lake, down the Pine River, through Cross Lake, up the Whiskey Jack River, through Kiskitto, Kiskittogisa and Playgreen Lakes. The Nelson to Cross Lake, through a chain of small lakes and rivers to the Wolf and Grassy Rivers and thence to the Limestone. Through Setting Lake and also Hurt, Sandy and Reed Lakes. Returned to Comorant Lake again and completed the Circle via the Cowan River.

Comorant Lake is a large body of water some 22 miles long by 18 wide. It is connected to Little Comorant Lake by the Narrows, which the Hudson Bay Railway will cross. It is open to small steamboat navigation from Le Pas and vessels occasionally run up. The fisheries in this body of water are still good though the catch this winter has not been up to expectations—some fish camps having had to move to other points. Fish inhabiting the waters are whitefish, in abundance, jack-fish, pickerel, "tulipe" (a fish resembling the white-fish), perch, dog-fish and a few trout. There are a number of fishing camps on this lake employing from three to ten men and using five to twenty nets.

In Moose Lake much the same state of affairs exists, though the camps are larger. All fish caught seem to be sold on contract to firms exploiting the north country—whitefish being 5 cents per pound, lake trout, 5½ cents. Fish for dog food are caught in thousands. Most of the first-class fish caught seem to go to the States. In Moose Lake, gold-eyes are caught also.

Cross Lake, Playgreen, Kiskitto and Kiskittogisa Lakes are practically all of the same character. They are shallow, narrow, abounding in reefs and rocks, and treacherous by reason of furious gales and choppy seas. Fish are plentiful there also—the traces of the winter's camps seeming to show that fishing had been good the previous season.

Resting and Setting Lakes, both deep, rocky lakes four and five miles wide by twelve long, seem to contain abundance of fish. At present there would be no way of shipping fish to civilization as the railroad is nowhere handy yet.

Reed Lake is a large body of water some twelve by fifteen miles. Fish abound in it, particularly lake trout, but it is not fished commercially, being practically cut off.

On the whole, all the lakes we were through seem well stocked with fish, but only those near the railroad were fished for commercial purposes. As the steel advances there are dozens of such lakes which will come within the radius and which will, for a few years, yield large catches of fish. There is danger, however, of these waters becoming fished out unless the Government enforces protection.

PORT ARTHUR FISH HATCHERY.

One of the most interesting as well as one of the most instructive projects being carried on by the Canadian government, is that of its fish breeding service. Buildings for the care of the fry of different species of fish found in the lakes and rivers of Canada, have been erected at different points along the shore of the great lakes. One of the most efficient of these buildings or hatcheries, is that one situated near the dry dock in Port Arthur, of which A. J. McNab is in charge.

At the present time the enormous amount of 37,160,000 fry are being cared for, and gradually growing into the form of fishes. Of this number 30,000,000 are white fish fry, 7,000,000 are salmon trout fry and 16,000 are brook trout fry. Over and above this number of fry, which will be "planted" in Lake Superior, Lake Nipigon, and the brook trout in several of the streams in this vicinity, are a large number of spawn which has been shipped away, including 1,000,000 salmon trout eggs to Banff, Alberta, 50,000 salmon trout eggs to British Columbia, 50,000 salmon trout eggs to Nova Scotia, and 75,000 salmon trout eggs to New Brunswick, or a total of 1,175,000 eggs.

The eggs taken from the brook trout, were taken from fish weighing from six to eight pounds, which goes to show that the supposed "fish-stockeries" heard in eastern cities about the monster brook trout in this country, are not "fish-stories" in the popular sense of the word, but real genuine, fish-stories.

The fact that eggs taken from this part of the country and shipped to points, practically all over Canada, proves that this country cannot be beaten for the quality of the stock of its native fish.

Men are like fish. Neither would get into trouble if they kept their mouths shut.

LAKE FISHERMEN URGE REMOVAL OF CLOSE SEASON FOR PICKEREL.

The abolition of the close season for pickerel on the Great Lakes was urged upon the Minister of Marine and Fisheries by a delegation from South-Western Ontario, on February 12th.

The situation at present is that while Canada has a close season on pickerel the United States has none, and when Canadian fishermen on Lake Erie and elsewhere cannot take this fish the American boats, but ten miles away in some cases, can take all they please. This is one way in which the work of the Canadian hatcheries has been harmed.

The pound-net fishermen have agreed that if the close season is removed they will supply the hatcheries with all the fish that may be required.

THE ONTARIO LAKE FISHERIES.

Answering in the House of Commons a question regarding the transportation of fish from the Maritime Provinces to Ontario, Hon. Mr. Hazen pointed out that his department was vigorously carrying on the propagation of fry to restock the depleted fishing areas in the Great Lakes, and also that the hatcheries were full. This is a welcome change from the way fry propagation was carried on under the late administration of the Department of Marine and Fisheries. Then the hatcheries were usually only half full, and sometimes only quarter full. In 1909, for instance, only $22,000 was spent in fry production for the Canadian fisheries on the Great Lakes, out of $180,000 expended in Canada for fish culture, and $322,000 appropriated for that purpose. Not $10,000 real value was put into the fish culture work for the Great Lakes. This inefficient way in which the propagation work was carried on led to heated protests from the Ontario fishermen. The putting of new life into the hatchery administration by Hon. Mr. Hazen ought to be the precursor of better conditions for both the Ontario fishermen and the Ontario fish-eating public. Undoubtedly, since the enormous rise in the price of meats, the fish-production question in Ontario is taking a new turn, and vigorous measures to restock the depleted Ontario fisheries are necessary to meet the new conditions.

So long as the fish caught in Canadian fisheries on the lakes goes chiefly to United States markets, through the operations of the Fish Trust, there is not a sharp incentive to carry on extensive restocking operations. The chief beneficiaries would be the fishermen, who in all Ontario do not number 3,000, and the trust and its American customers. Probably the benefits to the fishermen would be very small. But when the question of a larger and cheaper supply of fish becomes a matter of acute concern to Ontario consumers as a whole, the aspect of the fry propagation business changes entirely. It becomes a work for the general advantage of the people. Since members of the Ontario Government have tentatively broached the idea of restricting the export of two or three superior varieties of fish, such as whitefish and lake trout, in order to ensure that Canadians shall get the full benefit of the Canadian catch, there has been a rapidly growing public opinion in favor of vigorous development of the Ontario lake fisheries.

Sooner or later the Department of Marine and Fisheries will have to pay as much attention to restocking depleted fishing areas on the Canadian side of the lakes as it has been paying to the Atlantic and British Columbia fisheries. Comparisons of the catches on the Canadian and American sides of the lakes, and of the quantities of fry deposited on the two sides, show conclusively that it is possible by a few years of vigorous work to bring the Canadian catch of good fish away above what it has been in recent years. Instead of retrogression, there ought to be progression. Mr. Hazen apparently appreciates these facts, and has set to work accordingly.—Mail & Empire.

CONSERVATION OF LOBSTER FISHERY.

The wonderful productiveness of the Canadian seashores is such that the lobster industry is still carried on on a vast scale, and the total money value of the lobster fishery is greater than ever, but the annual returns are really misleading, because, while the supply of lobsters is declining, the price has so materially advanced that the total value is greater to-day than at any other previous period. Thus, in 1880, lobsters brought $5 a case, whereas last year the price realized was nearly four times that amount.

In the case of the oyster, though the price fo barrels annually produced on the Canadian beds is only half what it was ten years ago, the price per barrel has increased in about the same ratio as the price of lobsters, and is now four or five times what it was in 1880.

The following points are worthy of attention in considering the present condition of the lobster industry:

1. The size of lobsters has materially declined, great catches being of very smaller average size than in former years, while the fishing operations are carried on over a very much larger area, and with greatly increased number of traps, and in deeper water, and, in most districts, with the assistance of motor boats.

2. The traps used are more effective and destructive than formerly, and the parlour and other forms of trap have replaced the lobster pot used in past years.

3. There is a tendency in some localities to increase the small canneries and, in such canneries, to either pack the fishermen's catches on share or to pack them for the fishermen, charging a rate agreed upon for the cost of cans and the labour.

4. While the size limit has been ignored, and was practically a dead letter when various size limits were in force in the different lobster districts, fishermen realize that the taking of small lobsters has been detrimental. In such localities as the shores of Grand Manan island, a large size limit seems to have been observed. It is a widespread opinion that, by returning small lobsters to the water and marketing only the large lobsters, the value of the catch has been increased. But, in general, fishermen do not favor a size limit and some canneries would, for a time, be closed were the eight or nine-inch limit enforced generally. All, however, are convinced that the berried lobster—the female lobster carrying eggs—must be protected.—From Report of Dominion Shell-Fish Fishery Commission, 1912-13.

FISH IN THE NILE.

It is probable that the Nile contains a greater variety of fish than any other river in the world. An expedition sent by the British Museum brought back 8,000 specimens.

Motor Boat Notes

Black Smoke.

When a gas engine exhausts black smoke which rapidly disappears it is a positive indication of an over-rich mixture. Remedy: Reduce amount of gasoline allowed at needle valve, reduce tension on air check spring to allow more air, or both. When making the above adjustments allow a little time to elapse between each new setting of the needle or air valves in order that the motor may operate under the new mixture and indicate any existing fault.

* * *

Blue Smoke.

Blue smoke which does not disappear at once usually indicates an excess of cylinder oil. Remedy: Reduce oil gradually until exhaust clears. Care must be exercised to allow the motor sufficient time to use up the excess oil in cylinders, for otherwise the supply might be cut down to such an extent that when the excess oil in cylinders had been used up, the lubrication would then be insufficient and wear or seizing would result.

* * *

Ball Bearings.

When one or more balls are lost or broken the bearing should be fitted with a new set.

* * *

The Watch as a Compass.

By pointing the hour hand of a watch directly towards the sun, South will be indicated half way between the hour hand and 12 on the dial.

* * *

Base Explosions.

In two-cycle motors generally indicate a lean mixture. Remedy: Increase the gasoline supply, feed less air, or both.

* * *

Blow Back.

Through carbureter usually indicates that part of the compression in cylinder is leaking past inlet valve or valves. Cause, dirty or pitted valves, valves warped, hung up or out of time.

* * *

To Test Batteries.

Dry cells or storage batteries should be tested immediately after they have been in service and not before starting.

When Two Tremblers Buzz.

Or a unit of a coil operates when not in line with the timing of the commutator, there is a short circuit. A deposit of metal shavings in timer will sometimes produce this trouble, but it is more frequently attributed to a loose wire touching the commutator or a wire with broken down insulation.

* * *

Steering Lines.

Always keep steering lines taut to prevent the line from over-lapping on the steering wheel drum and forming a jam hitch.

* * *

Retard Spark.

Don't try to start without first making sure that the spark lever, timer or commutator is retarded.

THE LIGHTS OF HOME.

"Pilot, how far from home?
Not far, not far to-night,
A flight of spray, a sea-bird's flight,
A flight of tossing foam,
And then the lights of home!

"And yet again, how far?
And seems the way so brief!
These lights beyond the roaring reef
Were lights of moon and star,
Far, far, none knows how far!

"Pilot, how far from home?
The great stars pass away
Before him as a flight of spray
Mount as a flight of foam!
I see the lights of home."

—Alfred Noyes.

PERFEX ALL-IN-ONE — 1914 MODEL.

We herewith reproduce a full size photograph of the Perfex All-In-One Ignition Outfit, 1914 model, for use on marine engines. Each of these outfits contain a coil, condenser and vibrator, in a casing mounted on the spark plug. Being so

compact and absolutely waterproof, the Perfex All-In-One Ignition has much to recommend it for use in fishermen's motor boats. Perfex specialties can be purchased from the agencies in Montreal, Toronto, Winnipeg, Vancouver, St. John, Halifax, Victoria, Yarmouth and Charlottetown.

CANADIAN CAVIARE.

This interesting article was written by Dr. Edward Breck, Ph.D., and published in a recent issue of "Rod and Gun in Canada."

How true it is that a man is not a prophet in his own country! But here is a fish that is as good as unknown in its own country. It'll just waste a few words telling you how I discovered it.

If there is one thing I like to eat more than another, it is caviare. No doubt less than one per cent. of your readers have ever eaten it—as it should be. Why? Simply because the supply on this side of the Atlantic is very limited and the really good stuff is bought up by the first-class American hotels and clubs. There are few hotels anywhere nowadays where, if you ask for it, you cannot get what is served commonly as caviare, but it will, in ninety-nine cases in a hundred, be, not sturgeon roe, but that of any other fish, and, instead of being at least the size of No. 4 to No. 6 shot, and of a distinctly gray color, it will be like No. 10 shot and black as your hat. As to its taste—well, it doesn't taste like real sturgeon caviare at all. Ah, the caviare of Russia, or of—Nova Scotia! Spread a delicate piece of toast thick with it, add a little finely chopped onion and then squeeze a little lemon-juice over all and—Mohammed's Paradise hath not its equal!

An acquired taste it is no doubt, and most people at first might turn up their noses at it; but once you like it, you will steal silver spoons for it.

But in order to have your caviare you must first catch your sturgeon. True, but where? The Hudson and Delaware and other great American rivers that once were full of this important fish have now been more or less pre-empted by the manufacturers, and the sturgeon, though a bottom-of-the-river mud-fish, has generally followed the example of the salmon and deserted these waters. They have become too polluted even for his taste.

In Berlin I used to pay two dollars the pound for Russian caviare and never wince at the price, for it was quite fresh, though possibly not so good as on the native rivers. On this side of the water I have very often eaten so-called caviare-sandwiches and found them not unappetising as an "hors-d'oeuvre," but they were far from being first-class caviare.

Quite a number of years ago I began to come regularly to Nova Scotia, and have done what I could to help kick the Province up-stairs. Apathy is at home here. The people, it seems to me, have little idea of the growing importance of the tourist trade, nor of the inland fisheries, etc. My cabin-home stands in a tiny settlement of some dozen or so houses together with a summer hotel, whence people start out to hunt and fish, Americans almost all of them. During the season just closed, the sum paid out by the proprietor of this hotel to the local guides was within about $200 of $3,000. When you think that one of these men, with a little farming on the side, can keep a family in comfort and plenty on about $200 a year, you may see what the tourists mean to Annapolis County guides. Nevertheless there are not five place in the whole Province where the tourist trade is appreciated to the extent that it is here, though there are hundreds that could be exploited just as well. Now why am I taking so much space to tell about this? What is the connection with caviare? Simply this. The sturgeon fishery that I am going to tell you about briefly, lies not ten miles from the town of Annapolis Royal, and yet, barring a chance allusion, I have never even heard of it, and this with people knowing that it was my business to know all about all kinds of fishing! When, on the strength of the remark let fall by a native, I inquired at Anna polis about the fishery, I found about two men in the whole town who knew anything about it, but scores who didn't even know that sturgeon ran up the Annapolis River. And this with the best caviare I ever tasted on this side of the Atlantic being taken and prepared and shipped to New York within a few miles of them! Can you beat it?

I wrote at once to Mr. Henry Whitman of Round Hill, the man who catches sturgeon, and receiving a courteous answer, immediately repaired to that pleasant little village, and was made one of the Whitman family. Next morning I went sturgeon netting with young Charlie Whitman and his brother-in-law, Wagstaff, two efficient and kindly boys, who showed me how it was done.

The fishing path of Mr. Whitman has not been all roses. Politics has been in it, politics that ingredient without which apparently nothing can be done in Canada, the poison that permeates all her interests, private and public. We have enough of it in the good old United States, but here—save the mark! I can't tell you of the different manoeuvres used to kill this excellent industry. Mr. Whitman had a political enemy who did his best to make it impossible to net the sturgeon, and the salmon-anglers were enlisted against the business, it being asserted that the salmon were caught in the sturgeon nets. The season too was shortened, so that at present the best month, June, is exempted, a blow at Mr. Whitman. In fact I suspect that, when Mr. Whitman heard that I was coming, he was sure I was an emissary of the salmon-anglers, looking for data to confound him, and I take it to be a proof of his honesty that he cheerfully gave me all the information in his power and made it possible for me to see the whole thing from start to finish, even showing me his bills, letting me measure his nets, etc.

It is perhaps unnecessary for me to state that I had, and have, no sort of axe to grind whatever. I was led to Round Hill solely out of interest in fishing and a curiosity to see whether the cavaire produced from Annapolis River sturgeon was really good. But, having been there and heard the history of the industry and tasted the caviare, I consider it my duty to tell the Dominion Department of Fisheries that, to the best of my judgment, it is a business that should distinctly be encouraged, as it brings money to the country, and can be no detriment to anybody, certainly not to the salmon-anglers; of this latter statement I am positive. Inquiries, both of Mr. Whitman and others not themselves interested directly, assure me that even before the present eleven-inch mesh nets were used, very few salmon were ever seen by the sturgeon-fishermen, let alone taken, and likewise striped bass. With the present net, made of 48-thread cotton line, there is no possibility of taking in it the biggest salmon that ever went up the river. The Department should cease opposing this industry and help it from now on; anything else is, in my opinion, class legislation of the purest and most unjust type.

The fishing itself may not be exactly sport, but it is both interesting and exciting. It is done with a net about 200 feet long and fourteen deep, which is payed out from a dory, one man rowing and the other manipulating the net from the stern. It is started on the fast ebbtide about fifty feet from the shore, the net and boat drifting down stream together. I watched

the operation from a canoe manned by sturdy little Hugh Whitman. The men keep their eyes on the net-corks for evidences of a strike or a snag, the usual sign being the disappearance of some of the string of corks. A practised eye can tell the difference between a fish and a snag, but in either case the net is hauled in for resetting, which is also done when it bellies or drags or otherwise misbehaves itself. The bottom of the net drags the ground, but the sturgeon, being bottom fish, often slip under it and are not caught.

We had the good fortune to take four fish the day I was out, and the capture of the biggest one was typical. The corks suddenly began to disappear in quick order, meaning a good strike, and Wagstaff began hauling away, while Charlie kept the boat backed off. The fish had either struck the net high for a sturgeon, or else it had run to the top, for in a trice it was on the surface, slashing the water into foam with its powerful, sharklike tail.

"Careful, John!" sang out Charlie. "He's loose!"

Sure enough, the fish had disentangled itself and was in a good way to get clear. But luck was with us, for, instead of turning outwards, it plunged once more into the net, and John took the opportunity to lean over and strike the big gaff into it. The monster shook it off with a mighty thrash. Again and again fell the steel, while the spray all but shut out the fight from our vision. All seemed to point to the escape of the fish when John, making one last frantic slash with the gaff, leaning so far over the gunwale as almost to capsize the dory, sunk the steel deep into the fish just behind the ungainly head.

Then ensued a most exciting struggle. On one side was a mighty fish over eight feet long and weighing some two hundred pounds, built like a torpedo and one of the best swimmers of the ocean; on the other was a sinewy, determined man with a short steel gaff. It looked like a cinch for the fish. Sure one shake of that powerful head would send the gaff flying! But John set his teeth and held on. Not only that, but he began to lift and lift, until the bony head of the sturgeon was over the gunwale. To get a better purchase John for a second released his left hand and grasped the gunwale with it, and at that moment the fish made a tremendous slash with its armored tail, which struck the fisherman's thumb and gashed it deeply from nail to wrist. Many a man would have dropped the matter then and there, but not so John. He "hung tough," as the guides say, and, getting more and more mastery of the big fish, and at last, with a tremendous heave, hauled it into the dory, where it was promptly given its viaticum with the "priest."

John wiped the sweat from his brow and the blood from his hand, and remarked with satisfaction:

"Good! It's a cow."

Which meant perhaps, in so big a fish, some sixty pounds of roe at so-and-so much per pound, F.O.B. Round Hill. I shall not tell you just what the price is, for fear of making you jealous. As a matter of fact, as good as the business is, I would hardly advise many people to go in for it, for it requires long experience and a good deal of skill, to say nothing of preparing the caviare properly, a very delicate operation, done with a certain kind of specially imported salt, and in a very particular and finicky manner. The caviare prepared by Mrs. Whitman and served afterwards to a few friends of mine was positively the best caviare that ever passed our lips, and let all the rivers in Astrakhan overflow their banks in protest!

EFFECTS OF EXPLOSIVE SOUNDS, SUCH AS THOSE PRODUCED BY MOTOR BOATS AND GUNS, UPON FISHES.

(Document 752, U.S. Fisheries Bureau.)

By G. H. PARKER, S.D., Professor of Zoology, Harvard University.

That sounds affect many fishes has long been recognized by fishermen and naturalists. No less an authority than Izaak Walton declared that it would be a rule with him to make as little noise as possible when he was fishing, lest he be heard and catch no fish. Nevertheless it has been only within the last few years that the sense organs concerned with the reception of sound in fishes have ben definitly identified.

Using the term sound to include any vibrations of the water, from such slight movements as result from waves and currents to the vibrations that emanate from the impact of solid bodies under water or from the more violent discharge of explosives, it may be said that sound affect fishes through three sets of sense organs—the skin, the lateral-line organs, and the ears. Within recent years, it has been demonstrated that a fish can feel sounds through its skin in much the same way that a human being can feel the vibrations of a a musical instrument when his hand is in contact with it. It has also been demonstrated that certain fishes sense relatively low vibrations, such as trembling movements of the water, by means of the lateral-line organs. And further more, though this point has been disputed, it seems clear to the writer through work carried out under the auspices of the Bureau of Fisheries that the internal ears of fishes are not only organs for the adjustment of bodily motions and equilibrium, but also organs of hearing.

If, then, fishes are sensitive through so many channels to sounds, the question naturally arises as to the effect of the introduction of motor boats and other sound-producing mechanisms on the fishes of our shores. Are such devices favorable, inert, or prejudicial, in what ways can they be modified to make them least harmful?

Motor boats driven by exploding gasoline are equipped, as a rule, with an escape pipe which is situated close to the level of the water and through which the exploded gas is discharged in violent jets. This pipe is sometimes so arranged that its end may be dropped below the water level or kept in the air. When the gas is delivered into the air each discharge is usually accompanied by a familiar explosive noise of much penetration. When the delivery is into the water the sound is greatly muffled and freed for the most part from its objectionable penetrating character. This method of reducing the noise is so easily applied that in certain communities efforts have been made to require all motor boats to be thus muffled, at least between certain hours. The objection from the standpoint of the motor boats to this form of muffling comes from the fact that when the escape pipe is under water the obstruction to the free outward passage of the gases is so much increased that the efficiency of the motor is considerably reduced, and hence the running of the boat is impaired.

To the human ear under ordinary circumstances most motor boats either with or without mufflers are noisy appliances, generating sounds that are carried a long distance through the air. But in the water these sounds are very much less penetrating. To test this, a 7-horse-power motor boat with an exceptionally loud sound was run in open water and an observer plunged

under the surface as the boat passed. When within 10 or 12 feet of the boat, whose escape pipe was in the air, the explosions of the gas could be faintly heard, though they were disagreeably loud to the observer when in the air. With the escape pipe under water and at the same distance as before the noise of the explosions could scarcely be detected at all under water. Thus both methods of running the boat delivered into the water surprisingly little sound as compared with what escaped into the air, and of the two conditions the muffled boat yielded to the water much less sound than the unmuffled boat.

In testing the effect of the motor-boat noises on fishes, a number of kinds of fish known to be sensitive to sounds, such as killifish (Fundulus heteroclitus), young scup (Stenotomus chrysops), and young kingfish (Menticirrhus saxtilis) were placed in a large wooden cage, 4 feet square by about 2 feet deep, whose walls were of strong netting. This cage was fastened in quiet water at the end of a flat, and a motor boat of 3½ horse-power and with a penetrating noise was started at a distance of some 400 feet from the cage and run at full speed past it.

An observer was stationed on the float to note any response made by the fish. Tests were made with the escape pipe out of water and with it under water, but in neither instance was there any apparent effect upon the fishes. Most of these fishes, and especially the killifish, go down into deeper water when only slightly disturbed, but in these trials they remained playing about on the surface of the water while the boat passed and were in no observable way disturbed until the swash from the boat struck the cage, whereupon they generally dove to the deeper part of the receptacle.

Another test of a like kind was carried out on mackerel (Scomber scombrus). About 30 of these fish that had been for one or two days in a large pocket at the end of a pound net about a quarter of a mile from shore were gathered together by having the pocket pursed up into a space about 25 feet square and 10 feet dep. In this space they swam slowly about in a circle near the top of the water.

When an observer stationed in a boat at the edge of the pocket rose in the boat the fish very usually went to the bottom of their inclusure, to return to the surface after the observer had taken his seat again. While the observer was sitting and watching the fish a second person ran a motor boat over a circular course about half a mile in circumference, the course passing close to the pocket at one point. As the motor boat passed the pocket the fish were closely scrutinized by the observer. In no instance, either with the escape pipe of the motor boat above water or under water, did the mackerel sink into the deeper part of the pocket nor did they show in any other observable way that they were disturbed by the noise from the boat. Seven of them were then isolated in the cage previously mentioned and tested under close inspection by running the motor boat past the cage, but again the mackerel gave no evidence of being disturbed by the noise.

Although these tests seem to be quite conclusive in showing that the faint noises produced in the water by a motor boat have no marked effect on the ordinary activities of certain fishes, it is not impossible that the same noises may interfere with other activities of these fishes, such as feeding, pairing, egg layng, etc. The only tests in this direction that were carried out had to do with feeding. Hungry killifish, scup, and kingfish were placed in the cage previously used and the cage was fastened to a flat so that a motor boat could pass close to it. When the fish were feeding vigorously the motor boat was run by the cage several times, but in no case did the fish give up feeding in consequence of the noise.

Another test was made with baited lines. Two baited fish lines were lowered from the edge of a wharf until the bait was about 6 feet under water. In a short time the two baits were surrounded by cunners (Tautogolabrus adspersus), which began to nibble actively. A motor boat was now backed up under its own power from a distance of about 50 feet till its stern was directly over the baited lines. During the approach of the motor boat the fishes continued to nibble, notwithstanding the increasing noise, till the boat was within 6 feet of the lines, whereupon the fishes ceased nibbling. On running the motor boat away for a short distance, 6 to 8 feet, vigorous nibbling recommenced. It is difficult to say whether the cessation of nibbling, which regularly occurred when the stern of the boat was brought close to the lines, was due to the noise that reached the fishes or to the churning of the water in their neighborhood by the propeller of the boat. However this may be, it is certain that cunners can be driven from bait by a motor boat only when it is very close to them and that they are apparently uninfluenced by the same boat at a distance of 10 feet or so.

If a cunner can be driven from bait by the disturbance from a motor boat close at hand, other fish may be affected in a like manner, and should these be more sensitive to noises than the cunners, it is possible that they may be influenced when boats are at greater distances than 6 to 8 feet. There is, however, very little conclusive evidence on this point. In August, about the dock at Woods Hole, young bluefish (Pomatomus saltatrix) are not uncommon. They are often angled for with rod and line and afford much sport for the local fisherman. They bite well, even with motor boats making much noise in the harbor and passing the dock at a distance of about a hundred feet. If, however, a motor boat comes close to the dock, they are almost certain to cease biting for a quarter of an hour or so. Observations of this kind are by no means conclusive, but they favor the opinion that some fishes are disturbed by the noises from motor boats, though these disturbances are always very temporary and local.

The noises produced by motor boats have only a slight and local influence on fishes, not only because the noises that really get into the water are very faint, but probably because they reach the fish in the most favorable way for nonstimulation. Most persons who have experimented with the effects of sound on fishes have been struck with the fact that after a fish has responded once or twice to a given sound, it often ceases to respond to further stimulation for some considerable time, and in experiments of this kind it is usual to allow relatively long intervals of time to elapse between tests in order that the fishes may return to a receptive state. In the approach of a motor boat the sound that reaches the fish must be far too faint to call forth any response, and this sound grows so gradually in intensity and with such rapid reiteration that the fish probably acquires the state of nonreaction to sound by the time the stimulus has grown to such an intensity as would have been effective had a single shock been delivered at once to the fish. The gradual approach of the boat, then, does away with the element of contrast between silence and loud noise, and the result is just the reverse of that of summation, so often seen in the application of minimal stimuli to sense organs; the fish fails to respond.

NATIONAL SALMON DAY.

Friday next (March 13) has been designated as National Salmon Day, in honor of the world's most valuable food fish. As 1914 is the fiftieth anniversary of the founding of the industry, the day will be widely celebrated. The governors of most of the States in the Union have followed the example of the governors of Alaska, Washington, Oregon and California in proclaiming the day, and urging the public to use canned salmon in some form in honor of this American industry, which came into birth only fifty years ago, and to-day has an output of 400,000,000 cans annually.

Plans now being made for the celebration of Salmon Day, include public banquets in the principal cities, and through the co-operation of the various railway system, canned salmon will be served on every railway dining car in the United States on March 13.

The salmon canning business, unique among American industries had its origin in 1864, when G. W. and William Hume and Andrew S. Hapgood came to the Pacific Coast from the State of Maine, where the former had received some experience in the canning of lobsters. A small plant was constructed on a houseboat on the Sacramento River and 2,000 cases were laboriously packed by hand. It was not, however, until the intervention of automatic machinery for dressing the fish without the aid of human hands that the industry began to assume truly large proportions. Under present methods the process is almost entirely automatic. The fish are landed and cleaned; the cans filled, closed and cooked entirely by machinery of the most sanitary type.

From the initial pack of 2,000 cases, the industry has developed until it reached the highest point last year, with a pack of more than 8,000,000 cases valued at $50,000,000 retail. The major portion of it is consumed in the United States and England, where it is especially prized as a delicacy, but the government reports show that it is shipped to every country on the globe. The bulk of the present output comes from Alaska and Puget Sound.

Because of its high food values, canned salmon has been the subject of considerable investigation by the Federal Government, and reports of the Department of Agriculture show that it is higher in brain, blood, and muscle-building elements than sirloin steak, sugar-cured ham, eggs or spring chicken.

It is not only palatable and nutritious, but in these days of the high cost of living, it is one product which still remains well within the reach of the masses.

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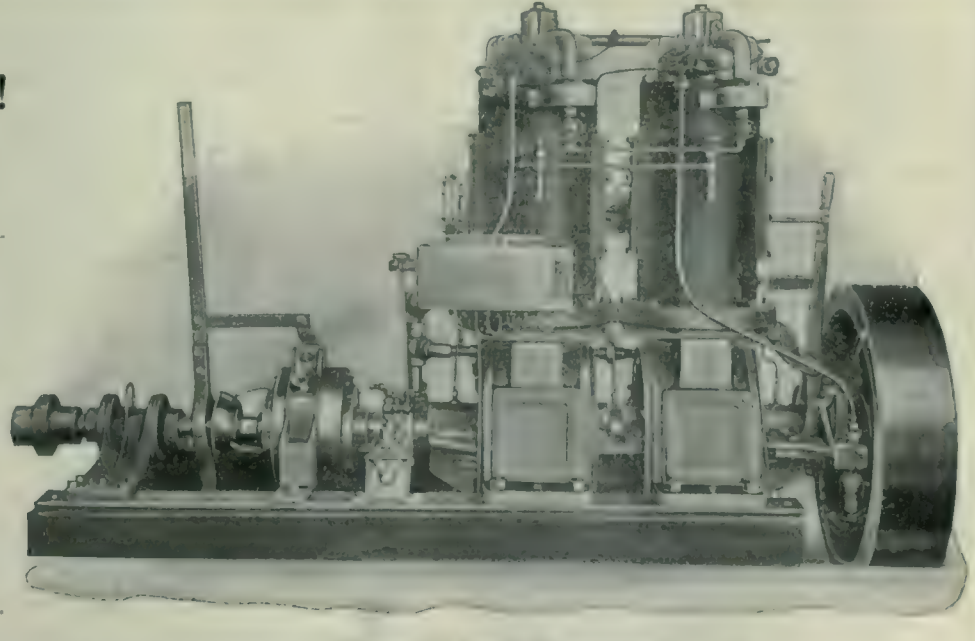

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SEAWEED UTILIZED.

Prince Edward Island, which became famous as a fox farming country, has extended its activities into another field. Business men of the Island were carried away with the phenomenal success of fox farming, which in some cases returned them 900 per cent, while the average dividend reported by thirteen companies was 208 per cent. These large returns from what is a unique and unusual enterprise led some of the more ambitious Islanders to go into another untried field—the using of seaweed for commercial purposes. It is well known that seaweed is very largely used in furniture making, the dried product selling around $40 per ton. Companies were formed to put the business on a commercial basis. A gasoline-driven motor mower controlled from a motor boat cuts the seaweed which is then loaded into a scow, brought to the shore and dried in the sun. According to the optimistic promoters, the industry has an almost unlimited future and will be very profitable as they create a valuable commodity out of something which has heretofore been regarded as of no value and rather as a nuisance. It will be somewhat unique if Prince Edward Island makes as great a success out of seaweed as it has out of fox farming.

FISH A REAL FOOD WELL WORTH USING.

It was recommended to the Biological Board of Canada at the fourth annual meeting of the Commission of Conservation that the board make use of fisheries experts who are not so much interested in the biological point of view as in investigating problems which would be of interest in fish culture.

That the stocking, curing and transportation of fish and questions of a more or less economic nature be taken up. These questions are important, and investigations of not only a scientific nature, but of great economic interest might be carried on at the biological stations at present established. It is to be hoped that the excellent suggestions made may be acted on, as the people of Canada would welcome any plan that would tend to lessen the high cost of living. The removal of the duty on live cattle going into the States has drained Canada of beef cattle, and fish must to some great extent replace meat on the family board.

If one wishes to know just what real lake trout or Lake Superior whitefish tastes like, they should eat it as served on the Booth Line of boats plying between Port Arthur and Duluth. Far from this delicacy, being a substitute for something better, it is sufficient in itself—a feast fit for the King's table. May the Government hasten the time when it will be possible for all to have it.—Mail and Empire.

The herring fishery on the west coast of Newfoundland, in which a number of Canadian and American vessels engaged, closed recently with a total catch of 65,554 barrels, against 71,685 barrels last year.

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THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE : 44-46 LOMBARD ST
VANCOUVER OFFICE : 104-105 HOMER ARCADE BLDG.
NEW YORK OFFICE: 206 BROADWAY

Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

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Vol. I. MONTREAL, APRIL, 1914 No. 4

THE FISHERIES IN HISTORY.

While Canada owes much of her development and prosperity to the natural resources incidental to the earth within the confines of her borders, yet a great share of credit must be given to the harvest she is receiving from the waters enclosed and adjacent to the Dominion's shores. Bountiful nature has endowed our country with elemental riches which form the basis for the mighty assets of Mining, Forestry and Agriculture, but the measure of Canada's inheritance was completed with the bounty of the myriad piscatorial life environed by her domains and adjacent to her territorial waters. Ranking with the three basic endowments already named, the Fisheries form the fourth which completes the splendid quartet of natural resources, and the cohesion of the four make the adamantine foundation upon which the Dominion's prosperity rests.

As a prime factor in the development and colonization of the country, the fisheries of the Atlantic coast can be characterized as the lode stone which drew the pioneers to our shores. From the northern provinces of France a hardy race of fishermen in quest of the cod ventured ever further westward in their pursuit of the fish, and from the Icelandic banks, in their tiny pinks, caravels, and shallops, they made a bold dash across the deep water until they struck the teeming schools upon the great shoal area off the Newfoundland coast. With but an occasional vista of the new land to the westward, they returned to their Basque, Breton, and Norman ports, and recorded nothing but the depth of the water they had fished in and a rough position of the spot as calculated by cross staff observations of the sun and courses steered. The presence of the land mattered but little with them then until the yearly increasing fleet engaged in the cod fishery ventured in on the rock girt shores for wood and water, and in their coastal explorations, coves and harbors were discovered in which they hauled their ships for careenage and repairs ere returning home.

The meagre accounts of these pioneer fishermen formed the incentive which sent Columbus, Cabot and Jacques Cartier—merchant adventurers—westward ho! They claimed the credit of discovery, but the real discoverers were the cod fishermen who dared the passage of the unknown sea in their quest for the schools of the fish from which they gained a precarious livelihood. Ancient records, written many years previous to the accounts of the accredited discoverers, hint vaguely at an inhospitable land across the Atlantic—a land of fogs and rain with an iron bound coast and few harbors—and without doubt the facts for these prehistoric records came from the harvesters of the sea.

Gold, and the mythical Eldorado, attracted the pioneers who followed Columbus, to the lands and islands skirting the Spanish Main, but it was the humble cod which inhabited our northern waters in vast schools unknown in European seas, that brought the earliest settlers to the Canadian shores. Coming across in the spring of the year, they built villages along the coast, and using them as a base of operations in the fishery, they remained all summer and returned home ere the winter set in. Some few preferred to stay, and finding the winter not so severe as they imagined it to be, became permanent settlers. In the natural course of events, the freedom of the life in the new country at-

tracted other hardy spirits. They brought their families with them, built houses, tilled the soil, and prosecuting the fishery within their vicinity, were enabled to sell their fish to the traders from the Old World. Combined with the products of the fur trade and the forests, the settlements became valuable properties in the eyes of France and Great Britain, and yearly, an ever-increasing stream of emigrants, tired of insular strife and intolerance of religious liberty, migrated westward and took up permanent abodes upon our shores.

To the Fisheries we must give the credit for forming the initial factor in the colonization of the Dominion, and thought it has lacked the whirlwind development peculiar to the other natural resources of the country, its greater exploitation lies in the future.

The student of Canadian history will find in Mr. E. T. D. Chambers's book "The Fisheries of the Province of Quebec," recently published by the Department of Fisheries, Quebec, an exceedingly valuable and interesting record of what has been written above. Mr. Chambers is connected with the Fish and Game Branch of the Quebec Government as Special Officer, and in the compilation of his most interesting and exhaustive volume he has literally dredged every known source of historical fact. To study his book is to become better versed in the early history of Canada's settlement, and from the point of view of the commercial fisheries and those connected with it, the record is extremely valuable giving as it does the ancient methods of fishing and the various waters in which fish were caught. Mr. Chambers deals very fully with the settlement of the Gaspe Coast by the fishermen pioneers and he throws many interesting sidelights upon the establishment of the great fish firms of C. Robin Collas, Fruings, and LeBoutiliers in the Quebec fisheries. Taking it altogether, Mr. Chamber's book, beautifully printed and illustrated, is an authoritive and valuable record, historical and technical, of Canada's Atlantic fisheries.

CLEAN HANDLING OF FISH.

Fish merchants and others connected with the trade are beginning to realize that cleanliness is their best card, in promoting the welfare of the fish business. In a recent editorial, the "Canadian Fisherman" preached the Gospel of Cleanliness, and as an evidence that such is the best thing for the business, we quote the following from the Gloucester Times:—

"Changes in the methods of handling fish will be introduced at the new Boston fish pier. Efforts will be made to avoid forking the fish any more than is absolutely necessary, and the gurry and scale-coated wooden handcarts which have so long been in use at T wharf may be replaced by conveyances of a type more easily kept clean. Experiments have been made with a metal handcart with a removable body that can be placed upon the scales for the purpose of weighing fish and then replaced on the wheels. Such a cart would do away with much unnecessary handling of fish. Another innovation is to have employees who handle fish wear uniforms which shall be spick and span each day, instead of wearing for indefinite periods clothing caked with fish scales and other dirt."

CANADA'S FISHING GROUNDS.

Counting the water areas within, and adjacent to, her own shores, Canada possesses the most extensive and abundant fisheries in the world, and no other country can claim to have within their territorial waters the vast amount of food fishes to be found upon the fishing grounds of the Dominion. Fringing the Atlantic, the coast line extends from Grand Manan, in the Bay of Fundy, to Labrador, on the Straits of Belle Isle—an approximate shore measurement, counting bays and indentations, of some 5,500 miles. Upon the Pacific Coast the coast line, owing to its irregular nature and the number of coves and islands, measures over 7,000 miles, while the Great Lakes, rivers, and lesser bodies of fresh water aggregate a total area of 220,000 square miles. Without counting the fishing "banks" which lie outside the territorial limits, all of the great mileage mentioned can be called "fishing waters," as, with the numerous harbors, bays, coves, straits, and islands on both the Atlantic and Pacific Coasts, the inshore areas are favorite spawning grounds for fish and incidentally well sheltered and easily accessible for the fishermen pursuing their vocation in the vicinity.

In addition to the territorial waters, Canada has the most of the great fishing banks adjacent to her coasts, and upon these great areas of shoal water lying from 10 to 150 miles offshore, Canadian fishermen reap a rich harvest from the vast schools of cod, haddock, halibut, hake ,cusk, and pollock which feed upon these banks in their unknown migrations. The quality of the fish is of a very high class owing to the low temperature of the water caused by the Arctic currents on both sea coasts, and the frigid origin of the streams flowing into the inland rivers and lakes.

SAFETY REGULATION FOR BANK FISHERMEN.

One of the laws incorporated in the new Fisheries Act reads as follows:—"No dory, flat, whaler or other boat whatsoever shall set out from any vessel engaged in deep-sea or bank fishing for the purpose of fishing with hooks and lines, trawls or similar appliances, etc., unless there is placed in such boat, to be retained therein during absence from such vessel, a mariner's compass, nor unless there is placed in such boat at least two quarts of drinking water and two pounds of solid food for each man of the crew of such boat. The owner of such vessel shall supply her at the commencement of

her voyage with as many serviceable mariner's compasses as she carries boats, in addition to the vessel's compass and also with the necesary utensils for holding water and with a serviceable fog-horn or trumpet."

Pity the poor cook or a fisherman when each dory-mate demands his two pounds of grub to take in the dory with him. He will probably insist that all "mugging up" be done out in the dories in order to avoid having a pile of unused food on his hands. The water regulation will need no enforcing as most bank fishermen fill their dory jar before making a set, but in the fog-horn regulation will the old "conch" hold good?

FISHERIES STATISTICS.

February, 1914.

The total value of salt water fish in first hands landed in Canada during the month of February, 1914, amounted to $396,980, which, notwithstanding extremely rough, cold weather, is $67,760 greater than the total for February last year.

The catch of haddock for the month is 4,825 cwts. greater than that for the corresponding month last year; while the herring catch, practically all landed in British Columbia, is 37,812 cwts. ahead.

The halibut fishery for the month produced 11,714 cwts., against 1,643 cwts. last year.

The smelt catch is 2,476 cwts. short of the catch for February a year ago.

The total pack of canned lobsters on the Atlantic coast, from November 15th to the end of February, was 9,764 cases; while the total shipment in shell was 20,963 cwts. During the corresponding period in the preceding year the pack was 6,370 cases, and the shipment in shell 26,330 cwts.

THE FIRST HUNDRED YEARS OF FISHING IS THE HARDEST.

(From Yachting.)

A little song I'll sing ye,
An' th' drift to it shall be,
Of th' men who made their livin'
From th' harvest o' th' sea.
Tho' th' life is tough an' heavy,
There's a little fact that cheers,
For th' fishin's only hardest
In th' first hundred years.

There's th' men who set on Georges,
On th' Channel an' Cape Shore,
From th' Quero down to Cashes,
An' th' Peak to Labrador;
Salters, haddockers an' shackers,
But where'er a vessel steers,
They'll tell you fishin's hardest
In th' first hundred years.

When ye're fishin' on a bottom
Which snarls up all yer trawl,
Jest use some healthy langwidge,
An' shet yer teeth an' haul;
Or, wind her with a gurdy,
Never mind yer parted gears,
Recollect th' hardest fishin'
Is th' first hundred years.

When th' fog rolls round about you,
An' th' vessel's out o' sight,
She'll be joggin' down to loo'ard—
Don't ferget it, but sit tight.
She won't go 'way an' leave you
So calm your anxious fears,—
An' remember fishin's hardest,
In th' first hundred years.

When a four tub set ye're haulin',
An' th' fish are strikin' good,
Don't mind a run o' halibut.
That strips off every snood,
Jest keep a-haulin' steady,
An' don't give way to tears,
But think o' stickin' gangin's,
For th' next hundred years.

When th' tide sets hard agin you,
An' you calc'late you'll drop,
Jest brace yer back up stiffer,
An' never think o' stop;
Tho' your hands are sore an' blistered,
An' your dory-mate, he jeers,
Jest remember as he guys you,
"It's th' first hundred years!"

When you're on th' Banks in winter,
An' you think you're goin' ter freeze
In a logy, iced-up dory,
Midst th' gray backed, crestin' seas,
Jest keep a'hauling steady—
Never mind th' way she rears,
Winter fishin's always hardest
In th' first hundred years.

When th' pens are toppin' full below,
An' ye've swung her off fer home,
When balloon an' stays'l's on her,
An' her wake is white with foam,
With her scuppers spurtin' water
As for Market Port she steers,
There's some little joy in fishin'
In th' first hundred years.

F. WILLIAM WALLACE.

INTERESTING FEATURES IN NEXT MONTH'S "CANADIAN FISHERMAN.

"Haddocking on Brown's Bank." Being the log of a trip made by the Editor upon a Canadian fishing schooner in March, 1914. Illustrated with unusual photographs.

"The New Boston Fish Pier," by Frederick Roche.

"The Legal Position of the Canadian Fisheries," by L. H. Martell, B.A., B.C.L. An article which explains the law of the Fisheries and the rights of the fishermen.

Technical Education for Fishermen

By COLIN McKAY.

Nova Scotia fish merchants, notably H. H. Smith and C. H. Whitman, have repeatedly urged the importance of providing a system of technical education for fishermen. In connection with its system of technical education launched a few years ago, the Nova Scotia government has made some effort to provide some technical instruction adapted to the requirements of fishermen at a few points, but what it has attempted has been on such a limited scale as to be practically negligible. The Dominion Department of Fisheries has through the investigations of experts at biological stations and elsewhere done considerable to develop scientific knowledge of the fisheries, and has also by means of practical experiments, such as bringing out Scotch herring curers, attempted to induce interest in new technical processes; but it has made no general effort to provide the fishermen with opportunities of technical education, such as are now provided in practically every other important fishing country except the United States.

Canada's fisheries yield a value of over $30,000,000 annually, not counting large quantities of fish caught for local consumption, the value of which has been estimated at another $10,000,000. Nearly 100,000 persons are directly employed in the fishing industry, and besides there are a large number of men indirectly given employment by it, such as vessel and boat builders, sailmakers, riggers, blacksmiths, motor engine builders, transportation workers, dealers in ice and supplies and retailers all over the country. Counting families and dependents upwards of half a million people in this country depend for their livelihood upon the fisheries.

Yet notwithstanding its great importance and still greater possibilities, notwithstanding that one person in every sixteen in Canada depends on this industry for a livelihood, practically no provision exists for the technical instruction of the men engaged either in the work of catching fish or curing them.

Both the Dominion and Provincial governments have spent millions on experimental farms, and in equipping agricultural colleges and schools, and in arranging through the agency of special lectures and demonstrations to place agricultural education within reach of nearly all rural communities. Colleges and universities with faculties of applied science, endowed by public and private money, offer young men an opportunity of instruction and training designed to fit them for employment in most other industries. In many of the larger cities technical institutions are maintained for the benefit of the mechanic and artisan.

Undoubtedly the government has done a good deal for fishermen in the way of maintaining fishery officers to enforce the regulations, designed to prevent depletion, operating fish culture plants, bonusing cold storage plants and dog fish reduction works, and issuing bulletins about the bait supply. But much of the work of the government has been perehaps as much in the interest of the people as a whole as the fishermen, and there is no doubt that it appears to many fishermen as a meddling busy body. And considering what the government has done for the farmers in the way of providing technical education, it may well be asked to do something in the matter of technical instruction for fishermen, and those employed in the industry generally.

The Government of Japan years ago established schools for the technical and professional instruction of those engaged in the fishing industry, and to-day Japan is said to be the greatest fishing country in the world. In Great Britain, Ireland, France, Norway and other countries the importance of technical education for fishermen has long been recognized, and a large number of schools giving a variety of courses adapted to the needs of the people in the industry have been established, some by the government, others under private auspices. It is reported that at the school in Grimsby, England, 891 persons were in attendance last year, certainly an evidence that the fishermen feel the need of the instruction given them.

Speaking of the need of technical instruction in this industry recently, Dr. Hugh M. Smith, United States Commissioner of Fisheries, said: "Education and instruction in the practical affairs of fishing and dependent industries are quite as essential for the highest success and best results as in any other industry; and, in some respects, growing out of changed economic and biological conditions, technical instruction in this industry which deals directly with natural products." And Dr. Smith adds that there is bound up with the question instruction of fisherman the larger question of the conservation of aquatic products and the general welfare of the nation as well as of the best interest of the fisherman themselves.

A Halifax fish merchant writing in the Halifax Herald some time since advocated the establishment of a college which would make a speciality of developing our scientific knowledge of the fisheries, and translate such knowledge into practical instruction to be given to the fishermen, through technical schools at different points. He declared that it was possible to double the value of the Nova Scotia fish catch through improved methods in handling.

In his testimony before the Royal Commission on Technical Education, Howard H. Smith, of Halifax, said:

"The government should collect and distribute more intelligent information with regard to the habits and movements of mackerel, herring, cod, etc. The prevailing winds, currents and temperature of the water all affect the bait fishes and govern the movement of the food fishes.. Our fishermen are quite ignorant of the known fact that fish are only obtainable in water of a certain known temperature, and that it is wasting time to try for them otherwise."

The Norwegian Government takes a fatherly interest in the industry there, and by technical education and practical demonstration secures best results for its men. Norwegians never think of setting nets for mackerel, herrings, etc., without testing the temperature of the water. They split their pickled fish a few hours after capture and wash it in running water, thereby extracting all blood, and making the flesh perfectly white; then pack immediately in export packages, keeping the original pickle on the fish and conserving its pristine flavor. Result:—Norway mackerel commands 100 per cent. more money than equally fat and exactly similar (out of the water) Nova Scotia cure.

"Our fishermen put mackerel in puncheons to soak in bloody water, and pack weeks afterwards, losing the entire flavor of the fish. They economize by buying

a cheap barrel which will not hold pickle. Result:—Rusty, discolored fish, worth $6.00 a barrel instead of $15.00. It sounds strange, but it is absolutely true.

"Listen to this also. A Lunenburg banker will wash 1,000 qtls. of green fish in the same water in order to save a few barrels of refuse for fertilizing—value, 50 cents per barrel, total $2.50; and deteriorate value of catch 50 cents per quintal, total $500.00; net loss, $497.50. I can prove the absolute truth of this happening time and again. The old fishermen refuse to change their antiquated methods; the government will have to educate the young by training several brainy, enthusiastic young men who will devote their time to teaching up-to-date methods to the fishermen and their children."

The Royal Commission on Technical Education in its report recently issued recommends:—

1. The issuing of simple and well-illustrated bulletins for the service of fishermen, similar in plan to those issued by the experimental farms and agricultural colleges.

2. The employment of travelling instructors to give short courses of demonstration suitable for fishermen at points easily accessible by them.

3. The provision of short courses of from one to two weeks duration similar to those being given at Peel in England and at Aberdeen in Scotland.

4. The inclusion of nature study, in connection with marine life and fishing, and some suitable practical work for the pupils, in the elementary and secondary schools in fishing communities.

5. The provision of winter schools for fishermen having courses of instruction of two kinds, one kind dealing chiefly with the life and habits of fish, methods of catching, curing, packing and marketing; the other kind dealing with mattters of navigation and includng courses of instruction in the use of engines, machinery and mechanical plant used in the industry.

6. The establishment of one or more central schools, (a) for the Maritime Provinces, (b) for the St. Lawrence, (c) for the Great Lakes, (d) for the Pacific Coast, to provide courses of instruction similar to the winter schools, but more advanced in character.

REVISING THE "MODUS VIVENDI" LICENCE.

The question of revising the "Modus Vivendi" in the direction of granting greater privileges to American vessels in Canadian ports is now receiving some attention on the south shore of Nova Scotia. N. H. Nickerson of Clark's Harbor, who, while editor of the Coast Guard was a consistent advocate of the idea of modifying the "Modus Vivendi," has been taking an active part in the present agitation. The aim of the agitation is to secure "modus vivendi" privileges to American vessels with motor equipment as well as to sail craft, with the additional privilege of mending gear in Canadian ports, and instead of requiring such vessels to pay a considerable amount for a licence, to let them off with the payment of a nominal sum, a few dollars a year.

Several interesting arguments are urged in support of this proposed change. It is said that if the licence fee was a nominal one, a larger number of American vessels would call at Canadian ports to purchase bait, ice and other supplies, leaving considerable money among the supply dealers and fishermen. Such vessels too would, it is claimed take advantage of the opportunity to tranship their catches, and forward by rail and steamer to Boston, thus giving employment to transportation companies and workers of various classes.

At present, it is chiefly the American salt fishermen that take advantage of the "Modus Vivendi," and they have been declining in number. A considerable number of the fresh fishermen of Boston and Gloucester make their catches on the Cape Shore, and it would be an advantage to them to have the privilege of buying bait or transhipping their fares for a nominal fee. It is said that when these vessels take out a "modus vivendi" license, half the fee is charged up to the crew, who are generally Canadian anyway, while the fact that they make short trips and change crews frequently, make it difficult to get any particular crew to consent to paying part of the licence fee. Mr. Nickerson claims that if these fresh fishermen were allowed practically free harbor privileges, ports like Shelburne and Liverpool would benefit greatly, as many American fishing vessels would practically make them a base of operations, instead of running back to Boston or Gloucester every time they made a fare, and thus losing a week or ten days that they might devote to fishing.

TRADE INQUIRIES.

Opportunities for Canadian Firms.

The names of the firms making these inquiries, with their addresses, can be obtained only by those especially interested in the respective commodities upon application to: "The Inquiries Branch, the Department of Trade and Commerce, Ottawa, or the Secretary of the Canadian Manufacturers' Association, Toronto, or the Secretary of the Board of Trade at London, Toronto, Hamilton, Kingston, Brandon, Halifax, Montreal, St. John, Sherbrooke, Vancouver, Victoria, Winnipeg, Calgary, Saskatoon, and Chambre de Commerce du Montreal.

Please quote the reference number when requesting Addresses.

220. **Herring.**—A fish dealer in Havre wishes to be put in touch with exporters of fresh kippered herring.

221. **Seal.**—An agent in Dunkerque, France, desires to communicate with corporations or individuals engaged in the export or fishing of seals.

225. **Codfish.**—Canadian exporters of codfish desirous of obtaining markets in Cuba for this commodity are invited to correspond with leading commission merchant in Havana offering bank references.

227. **Sardines.**—Inquiry is made by leading commission merchant in Havana for the names of Canadian exporters of sardines desirous of extending their field to Cuba. Bank and other satisfactory references offered.

STANDARD MOTORS OPEN NEW BRANCH.

A new exhibition and salesroom for Standard engines has been opened in Boston at 99 Haverhill street. This will be in charge of Louis T. Carey. Mr. Carey is well known as a practical marine engineer and the practical service he can render to Standard customers will be valuable to them. He has recently spent a couple of weeks at the Standard plant, familiarizing himself with the latest developments and shop practice. A representative line of Standard engines and Standard oil engines will be carried at Boston, which will further help Mr. Carey in his work of being of service to buyers and customers.

THE NEW FISHERIES ACT

The Changes brought About by the New Fisheries Act Briefly Considered.

By L. H. MARTELL, B.A., B.C.L., Barrister-at-Law.

The new act amends and consolidates Chapter Forty-five of the Revised Statutes of Canada of Nineteen Hundred and Six, and Acts in Amendment thereof. The consolidation makes the Act more easily accessible, while the amendments bring into being many things absolutely necessary for the proper administration of the fisheries, one of Canada's greatest assets, and remove many absurdities and obsolete requirements of the old acts. In general, the new Act is a great improvement upon its predecessors, and brings to pass long-felt wants both of the departmental administrators, and the fishing industry generally.

Short Title.

The Act is still known as the Fisheries Act, and repeals Revised Statutes of Canada, 1906 chapter 45; chapter 20 of the statutes of 1910; chapter 9 of the statutes of 1911 and chapter 23 of the statutes of 1912.

Interpretation and Application.

The "interpretation clause" has been made more explicit in its application by enacting that "fish" includes shell fish, crustaceans and marine animals—that is to say, everything that swims in the deep, which, but for the said clause, the Act would not include, and as a consequence, counsel for the defence of a violator of the Act is stopped from setting up one of his favorite contentions that the fish or thing taken or caught from the deep is not covered by the provisions of the Act.—a thing which he was prone to do—and very often did with success—under section three of Chapter Forty-five of the Revised Statutes of Canada of Nineteen Hundred and Six. The interpretation clause there defines a "fishery" to mean and include "the area, locality, place or station in or on which a pound, seine, net, weir or other fishing appliance is used, set, placed or located, and the area, tract or stretch of water in or from which fish may be taken by the said pound, seine, net, weir or other fishing appliance, and also the pound, seine, net, weir or other fishing appliance used in connection therewith." There was no definition of the word "fishery" in the old acts. The result was that when any person violated any of the rights of a "fishery" it was necessary to adduce expert evidence as to what a "fishery" really was and a "fishery" would vary according to the locality in which the action was brought. The definition eliminates the necessity for such evidence, and now, if a person is cited before the courts for violating some person's "fishery" within the meaning of the definition, and expert evidence and local conditions do not have to be taken into consideration.

Fishery Guardians.

Under the old act it was not competent for the Minister to appoint temporary fishery overseers known as "Guardians," for such short periods as might be deemed necessary in the public interest without the authority of an Order-in-Council. Such guardians were, however, appointed for many years past, though their appointment was "ultra vires," i.e., beyond the authority of the Minister. It will, therefore, be readily seen that the guardians so appointed were without any status under the law, and as a consequence had no authority whatever to perform the duties necessarily incumbent upon a protector of the fisheries. Under the new Act the Minister is authorized to appoint fit and proper persons to act as fishery guardians without the authority of an Order-in-Council when he considers that such is necessary in the public interest. The fishery guardians so appointed have ex-officio, the powers of a police constable for all the purposes of the Fisheries Act.

The Whale Fishery.

The sections of the new Act relating to whale fishing cover very much the same ground as the provisions of the old Act. However, the phraseology of the sections has been improved and made more intelligible, the distance that must exist between factories for the converting of whales into commercial products has been increased from fifty to one hundred miles, the clause relating to the equipment of a factory has been changed, so as to relieve the factory owner of unnecessary restrictions, and the other clauses in the premises generally amended so as to encourage rather than retard industry.

The Lobster Fisheries.

No change has been made in the Act as regards the question of the granting of lobster canning licenses. The section relating to the labelling of cases containing lobsters now permits of the branding of the case with such a brand as is prescribed by the Minister, if it is considered by the Department in the public interest, as well as in the interest of the canners in the light of the conditions obtaining that a brand is preferable to the old system of labelling. The new Act also renders it necessary for a licencee to produce his license on being requested to do so by any person designated by the Minister. The Act also requires that the Minister shall prescribe the form of the sworn statement which licensed cannerymen shall make of the results of their operations and authorizes the Minister to fix the date on which such statements shall be filed with the Department of Marine and Fisheries.

The old Act fixed the date for making the return or statement at the 31st day of March. Owing to the fact that the legal lobster fishing seasons are at different seasons of the year on different sections of our coasts, it was absolutely impossible for all canners to make a return on the 31st day of March. Hence the change brings the law more in consonance with conditions as they obtain in connection with the lobster canning industry.

Possession of Fish.

The law made and provided by the new Act in the matter of the possession of fish is of far-reaching importance. Section 44 of Chapter 45 of the Revised Statutes of 1906 read as follows:—"No one shall, without lawful excuse, the proof whereof shall lie on him, buy, sell or possess any fish, or portion of any fish named in this Act, caught or killed at a time or in a manner prohibited by law." Under that section it was necessary for the prosecutor or complainant to establish as a preliminary fact that the fish had in possession were caught at a time or in a manner prohibited by law. Possession in itself was not an offence. In many cases there was no doubt in the mind of the prosecutor or

complainant that the fish were caught during a close season or in a manner prohibited by law, but he often could not establish this preliminary fact, so as to shift to the defendant the burden of showing lawful excuse. For many years the Department held that under section 44 of the old Act "possession" was in itself an offence, but on a case coming to the attention of the writer while an official of the Department, he contended that it was not, and on a reference to the Department of Justice his contention was upheld. Hence the amendment or new section. Under the new section "possession" in itself establishes a "prima facie" case against the defendant and the burden at once shifts to him to show lawful excuse for the possession. The result of this new section or amendment will be to prevent much illegal fishing.

Construction of Fishways.

The sections relating to fishways have been amended and improved by permitting the Minister to authorize and require the construction or digging of canals around dams or obstructions where such would be more efficient than ordinary fishways through said dams or obstructions. The Minister is also authorized and empowered to cause to be destroyed any dams or other obstructions to the passage of fish without being liable to an action for damages, and in cases where the owner is known to recover the expenses of such destruction or removal from him.

Regulations.

The effect of the new Act as regards the power of the Governor-in-Council to make regulations relating to the time and manner of fishing, and the export of fish will not bring into existence anything detrimental to the industry. Regulations in this connection were made in the past by the Governor-in-Council; but as Parliament had not delegated such authority to the Governors-in-Council, the regulations so made were "ultra vires." The new clauses permit of such regulations being legally made in the future.

Powers of Fishery Officers.

The powers of fishery officers have been increased under the new Act by giving them authority to search, break open and search any house, vessel or place where they have reason to believe any fish taken in violation of the law is concealed. A fishery officer, guardian or a peace officer, is given authority to arrest without a warrant a person whom he, on reasonable and probable grounds, believes to have committed an offence against the fisheries law, or whom he finds committing or preparing to commit an offence against said law. It is also made an offence for any one to obstruct any fishery officer or guardian in the discharge of his duty.

Penalties.

The new Act provides a minimum penalty as well as a maximum penalty in most cases. This was rendered necessary owing to the fact that when the magistrate trying a case had no minimum fixed by law he often allowed the convicted defendant to escape with a fine not in any way commensurate with the offence committed.

Appeal.

The new Act permits any person who feels himself aggrieved to appeal to the courts, provided by Part XV. of the Criminal Code. Prior to this Act the only appeal was to the Minister. The appeal to the Minister still remains; but in granting an appeal to the courts provided by Part XV. of the Criminal Code the new Act makes one of its chief and most important changes. Under the old Act the magistrate trying the case could make all sorts of mistakes, might find a party guilty on evidence which was not conclusive and which was inadmissable, and the only remedy of the defendant (unless there was want of jurisdiction, when a writ of certorari might be applied for) was an Appeal to the Minister. The evidence was probably read by a person in the Department absolutely ignorant of the rules as to what is and what is not evidence, and with the idea that the chief object was to confirm the conviction, recommendations would be made to the Minister of the Department who is usually a very busy man, that the conviction be confirmed and the appeal not allowed, and the poor fisherman thus deprived of his rights. By still having an appeal to the Minister, cases where the defendant is technically guilty under the law can be tempered with mercy, but by authorizing an appeal to the regular courts of the country the fisherman is assured of that fair play and justice for which the courts of Canada are noted.

THE MACKEREL FISHERY OF CANADA

By WESLEY FROST,

United States Consul at Charlottetown, P. E. I.

Forty years ago the mackerel industry of Canada ranked next to the cod industry as the greatest and most remunerative of the Dominion's famous sea fisheries. It supplied one-fourth of the entire value of the nation's fish production, and attracted to Maritime waters the fishing vessels of half a dozen foreign powers. Unfortunately, the industry was so strenuously prosecuted, by American purse-seiners and others, that by the end of the nineteenth century the mackerel had for some years been either exhausted or driven away from their Canadian resorts. The decline of the fishery attracted general notice and regret. During the past decade, however, the mackerel take, while not large in comparison with those of the seasons which so many fishermen still remember, has nevertheless maintained itself fairly well. For a number of years past the fishery has held its ground as eleventh among those of the Dominion; in Nova Scotia and Quebec it ranks fifth and in Prince Edward Island seventh among the provincial sea-food resources.

Dominion Mackerel Statistics.

The trend of the industry can be noted from the following decennial statistics of Canada's exportations of mackerel by fiscal years ending March 31 (the figures for 1871 being estimated):

Year.	Exports of Fresh Mackerel.		Exports of Salt Mackerel.	
	Lbs.	Value.	Bbls.	Value.
1871.	3,000	$1,000	219,916	$1,029,677
1881.	729,962	22,355	167,285	794,194

1891	3,737,754	156,419	72,803	773,780
1901	380,336	18,134	40,130	283,157
1911	1,420,882	89,730	9,281	136,838
1913	3,118,541	175,488	15,871	195,320

The exportations of fresh mackerel have in fact increased rather than fallen off, as the figure for 1891 was very abnormally large. This is of signficance to the United States, because our country takes, and has always taken, the entire volume of fresh mackerel exported from the Dominion. Not only does the stability of this trade seems assured, but with the rapid development of facilities for refrigeration and transportation, the sales of fresh mackerel to New England and New York seem certain to mount steadily. The completion of the Prince Edward Island car ferry in 1915 will alone release for marketing in a fresh condition 600,000 pounds of mackerel which must at present be pickled before shipment. Of exports of salt (pickled) mackerel from Canada the United States takes approximately two-thirds, the remainder—inferior spring fish —going to the British West Indies. The removal, by the American tariff act of October 3, 1913, of the customs duty of 1 cent per pound upon salt mackerel may divert even the latter into the southern part of the United States.

The mackerel fishery in Canada is confined exclusively to the four lower Provinces, Nova Scotia, New Brunswick, Quebec and Prince Edward Island. The value of the output, both fresh and salt mackerel combined, during the fiscal year ended March 31, 1913, was $635,293, and was distributed as follows (hundredweight—100 lbs.);

Province.	Fresh Mackerel Marketed.		Salt Mackerel Marketed.	
	Cwt.	Value.	Bbls.	Value.
Nova Scotia	48,771	$322,969	11,944	$156,191
New Brunswick	6,010	60,100	45	675
P. E. Island	504	5,310	1,647	27,369
Quebec	20	200	3,922	62,752
Total Canada	55,305	$388,306	17,558	$246,987

The figures for Prince Edward Island given an incorrect impression, since the Island's mackerel take in 1912-13 was by no means up to its standard quantity. During the season just closed the Island's catch of mackerel, on the other hand, was exceptionally large, totaling 11,588 hundredweight, valued at $44,721.

Spring Fishing Season.

There are two mackerel seasons on Prince Edward Island. The first occurs late in May or early in June, by which time the schools which American fishermen meet off Cape Hatteras in April have made their way north to the Gulf of St. Lawrence. For ten days or a fortnight, while passing the Island en route to their spawning grounds around Bay Chaleur in northern New Brunswick, considerable quantities of the fish are taken by net fishing. As they are merely in transit they do not come inside the bights of the coasts, and the fishing has to be conducted outside the three-mile limit, where the depth is 18 to 25 fathoms or more, and the fishing can only be effective with nets.

These mackerel nets, which are obtained for the most part from New England cordage companies, are usually about 25 fathoms long and hang to a depth of 8 fathoms. The mesh is 2½ to 3½ inches, the average being 2¾ inches, and the nets are about 200 meshes deep. It is said that they cost the fishermen about $12. Each net reqnires about 30 pounds of cork floaters, which the fishermen cut in 4-inch squares out of sheet cork 1½ inches thick and attach to the top line with twine about 15 inches apart. The sheet cork costs the fishermen 5 cents per pound. In some cases the fishermen anchor one end of a net, leaving the other end to swing free, and in other cases they anchor both ends. In calm weather when the fishing is brisk they occasionally float a "fleet" of four to six nets, free at both ends, and drift all night with this fleet. In such instances the number of fish obtained from each net is 75 to 90, or not far from one-half of a barrel of 180 fish.

The spring fish are lean and of poor flavor, although many are weighted heavily with roe. At the eastern end of the Island, where the shallow water runs far out to sea, the nets are not infrequently so tossed by storms as to injure the fish. The average price of spring fish averaging 180 to the barrel is only $8 per barrel, and often the take is composed of fish so small as to average between 200 and 300 to the barrel. For the most part the spring fish are pickled for the West Indian market, but a small share is peddled through the Island. Last spring the Rustico branch of the North Atlantic Fisheries Company is said to have shipped a quantity of fresh spring mackerel in ice to Halifax, and to have held them there in cold storage into the early summer, receiving as high as 50 cents per fish at that time. The mackerel shipped fresh, at any season of the year, are not drawn. These round fish, in the spring, average about sixty three-pound fish to the barrel, the same grade of barrels being used as in the case of salted fish.

Summer Fishing Season.

Early in June until the latter portion of July no mackerel are fished. By early August the spawning process is well over and the mackerel appear again in the Island waters. At this season they come closer inshore, where the depth is only 5 to 15 fathoms; and as this brings them within the three-mile limit the fishing can, under Canadian regulation, be done only with hook and line. Occasionally an American or French vessel equipped with seines operates successfully for a few days outside the international line. The great majority of mackerel fishing of every description is carried on along the northern and northeastern shores of the Province, the Bradley bank, five miles off Souris, being especially actively fished.

The ordinary mackerel hook, known as a "jigger," is 2½ or 3 inches in length, with a loop one-half inch wide, and is manufactured in Scotland. Salt herring usually constitute the bait, and a barrel of herring will last three or more days of the most active fishing. Most fishermen put up from 40 to 50 barrels in April or early May of each year for their season's cod and mackerel fishing. Clams and capelin are also used for bait. When ground bait is used, it consists of the various fish just mentioned ground up in a small bait mill, costing about $15.

The summer fish are known as the "fat mackerel," and bring the fishermen $5 per 100 fish for small sizes running 200 or 220 fish to the barrel up to $12 and $14 per 100 fish for bloaters running 85 or 100 fish to the barrel. Each fisherman work independently, although customarily with the aid of a relative or hired assistant using a 22-foot gasoline boat, and disposing of his catch to buyers at the landing stage. The boats go out at 3 a. m., when the fish are said to bite most freely, and remain out until noon. In warm weather it is advisable to get the fish ashore by midday, but in cool weather the boats remain out until 4 p. m. or later, and even

boats which come in at noon return for the afternoon's fishing. The mackerel season closes each year at about the 10th or 15th of October.

Methods of Packing.

The mackerel upon being brought ashore are immediately split and cleaned, and after one or two hours' soaking in sea water are rimmed or plowed along the inside of each flank to aid in curing. After an all-night immersion in sea water, or a less period if the temperature is warm, the fish are then rubbed freely with salt and laid away in large butts or puncheons for two weeks or more to shrink. The puncheons used are bought for 60 or 80 cents from country and town merchants, coming originally from the Barbados filled with molasses. They hold four barrels of mackerel. After the fish are shrunk or "struck" they are rubbed with salt, weighed carefully, and packed 200 pounds in a barrel. A beam scale and tub are used in the weighing process. The barrels, which are mostly made by Island coopers from stave wood brought from New Brunswick, cost 75 cents each and weigh about 30 pounds when empty. After the barrels are packed they are headed up and a hole is bored, through which they are filled with a saturate solution of salt water—or, as the fishermen put it, with water salt enough to float a salt mackerel—so that none of the salt encrusted on the fish will be melted off. The barrels when ready for shipment weigh about 300 pounds.

It is said that a few mackerel were formerly canned in Prince Edward Island, but the official statistics for some years back show no evidence of this practice. At all events, it has now been discontinued.

Prince Edward Island Catch, 1913.

The following tables show the quantity, value and distribution of the Island's mackerel take during 1913, as compiled from the monthly bulletins of sea-fishery statistics for the calendar year just concluded:

Mackerel caught—

Month.	Cwt.	Value.
May	20	$80.00
June	4,855	14,434.00
July	1,037	3,129.00
August	894	4,116.00
September	3,228	15,192.00
October	1,554	7,770.00
Total	11,588	$44,721.00

Mackerel marketed—

	Salted. Barrels.	Fresh. Cwt.
May	...	20
June	941	2,032
July	335	30
August	290	23
September	902	520
October	511	19
Total	2,979	2,644

Mackerel caught and landed—

	Kings County. Cwt.	Queens County. Cwt.	Prince County. Cwt.
May	20	.....	.....
June	1,914	1,003	1,938
July	345	170	522
August	75	354	465
September	1,800	1,236	192
October	1,500	54	.....
Total	5,654	2,817	3,117

The season of 1913 was exceptionally prosperous. The summer fish did not strike in until early in September, a full month late, but they then came in such quantities and remained so late that Kings County was able to exceed the records of many years past. Not only were the mackerel caught at the eastern end of the Island abundant, but they were of remarkably large size, 90 to the barrel being not unusual.

It may be mentioned that certain of the Island fishermen believe that the activity of the lobster industry in recent years has driven away or kept away a portion of the mackerel schools which formerly visited Island waters.

MORE COMPLIMENTS.

"I have received three numbers of the "Canadian Fisherman" and find it very interesting and instructive in my line of business in buying and selling fish." Mr. Ira J. Hawkins, Beaver Harbour, N.B.

"I think you have struck the right chord at last. It always seemed strange to me that every other industry in our Dominion has a paper devoted to its interests except the Fisheries. I consider this is one of the most important of our Industries—at present only in its infancy. I wish your publication every success and hope you will uphold with all your power the protection which our Fisheries need." Mr. Jas. A. Hierlihy, Brae Harbour, P.E.I.

"I beg to compliment you upon the "Canadian Fisherman's" engaging appearance, and the meritorious and varied contents. Such a publication is undoubtedly needed as an exponent of the rich and widespread fishery interests of the Dominion, and I am glad to know it is to be so well supplied." Mr. J. E. B. McCready, Publicity Agent for Prince Edward Island.

Mr. P. C. Parkhurst, head of one of the largest and best known fish firms of Gloucester, Mass, writes:—"Am very much pleased with the January and February numbers, and thing it a grand good journal. I have been connected with the Fisheries here in every way all my life, and for this reason know a good thing in the fish line when I see it."

BANK FISHING IN THE OLD DAYS.

Captain Gilbert Ellis, of Digby, N.S., recalls a fishing trip he made 33 years ago in the Provincetown schooner "Robert Raikes." On this trip they were five months and ten days at sea without once running in to a port. As a result of the cruise, they brought in a fare of 2,400 quintals of salt cod and 100 quintals of flitched halibut. Nowadays it would be quite a job to ship a gang willing to hang out that length of time on a single trip.

American mackerel fishermen are protesting strongly against the sale of fish by culling into large, mediums, and smalls. It is difficult for any man to really define the exact sizes. Sale by weight is the only satisfactory method.

To say that a person drinks like a fish is not correct. A fish certainly takes a vast amount of water into its mouth, but it is expelled again through the gills after the air and food matter is strained out of it. During this operation the fish's throat is closed up, and no water goes into its stomach.

LOCKPORT, N. S.

A Progressive Fishing Port.

By COLIN McKAY.

One town in Nova Scotia whose fortune depends on fish has enjoyed a boom in land values as remarkable in its way as the stories told of the boom cities of the west, whose abounding life depends on wheat. Seldom has there been a more striking illustration of the importance of the fishing industry to a community than that afforded by the experience of Lockport, N.S.

A generation or so ago Lockport was an important fishing port. It sent a large fleet of fishing vessels to the Grand Banks, and owned a fleet of brigantines and schooners which were employed to carry the catch after being cured to the West Indies and elsewhere. But with the change in the methods of conducting the fishing industry the town lost its grip, and for some years its population and business dwindled. A few business men like Wm. McMillan still had faith in the town, and employed a few fishing vessels, and strove to encourage the development of the shore fisheries. But the young people were leaving; houses were vacant; many fine properties were being offered for a song without attracting purchasers.

Then the Swim Bros., two young men from Cape Island, established a fish buying business there, and about the same time J. J. Lane, an American appeared with a proposition to establish a cold storage plant and general fish business. While the local members of the legislature, Robert Irwin and M. H. Nickerson were trying to persuade Mr. Lane to locate at Shelburne or Clark's Harbor, Thomas Locke, a descendant of the family, who gave the town its name, induced Mr. Lane to start his business at Lockport.

To-day the Lockport Cold Storage Company, which is now controlled by Senator Mackay of Montreal and William Hodge, has one of the most up-to-date fish plants on the coast, and is doing a large business. Many improvements have been made since the management passed out of the hands of the promoters; parts of fish formerly thrown away by the fishermen

Fishing Vessels at Lockport Wharves.

are utilized to manufacture glue or other by-products; even the boxes for packing fish are manufactured on the premises.

The enterprising Swim Bros., starting with little capital, have also developed a large business, and are now building and equipping fishing vessels of their own.

Quite a fleet of off-shore fishing vessels now make Lockport their headquarters; American and Lunenburg vessels come there for bait from the cold storage plant; and a great development has taken place in the shore fisheries.

Plant and Wharves of the Lockport Cold Storage Co.

Lockport is again a thriving town. Young men from along the coast are flocking there to man the fishing vessels, and the fishermen are making as much money as they could out of Gloucester. All kinds of business have been given a decided impetus, and population is increasing. In six years land values along the waterfront have gone up six hundred per cent, and properties which nobody ten years ago would have taken as a gift are worth thousands.

And the application of modern methods to the fish industry has not only launched Lockport upon the sea of progress and prosperity, but it has roused other towns along the coast to the possibilities of the development of the fisheries generally.

HADDOCK ROES.

A market is wanted for haddock roes. Can supply a large quantity. State price and quantity required for a trial shipment. Address Roes, Care of Canadian Fisherman, 35 St. Alexander Street, Montreal.

WANT NEW LIGHTS ON NOVA SCOTIA COAST.

Vessel and boat fishermen of south-western Nova Scotia complain that Brier Island light, entrance to Bay of Fundy, is not powerful enough to be a reliable aid to navigation. As this is one of the leading lights in the navigation of the Bay, not only for fishermen, but coasters and ocean vessels, it should be a light of the first class order. A lighthouse should also be placed upon Gannet Rock, south of Cape Forchu, N.S.

WHOLESALE FISH PRICES, MONTREAL MARKET.

(Quoted by D. Hatton Company.)

As it is generally on the eve of Easter time, trade is quiet. The sudden break in the weather has stopped the sales of frozen fish, and as a consequence, larger stocks are held unsold than was anticipated. Frozen halibut and salmon are demoralized, and selling at nominal prices. A few arrivals of fresh sea fish have taken place lately, and have sold readily at firm prices. Fresh lake and river fish are expected any day now to arrive in good quantities. A few small lots are coming daily and bring fancy prices. Market is cleaned out of pickled herrings and salted codfish. Smoked herrings and dried fish is also scarce. Oysters and lobsters are slow and at lower prices. A period of dullness is expected to extend all through present month.

Fresh Fish.

Haddock . . . . . per lb.	.06	.07
Market Cod . . . . . per lb.	.05	.06
Steak Cod . . . . . per lb.	.07	.07½
Dore . . . . . per lb.	.18	.20
Pike . . . . . per lb.	.10	.12
Perch . . . . . per lb.	.10	.12
Carp . . . . . per lb.	.09	.10

Smoked Fish.

Haddies, 15 lb. boxes, fresh cured, per lb.	.08
Haddies, 30 lb. boxes, fresh cured, per lb.	.08
Haddies, Fillets, fresh cured . . . . . per lb.	.12
Yar. Bloaters, 60 in a box, Niobe—selected	1.10
St. John's Bloaters, 100 in a box	1.10
Smoked Herrings, medium, per box	.15
Smoked Boneless Herrings, 10lb. box	1.10
Kippered Herrings, Niobe—selected	1.10

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.15	.16
Salmon, Red—Steel heads, per lb. . .	.12	.13
Salmon, Red—Sockeyes, per lb. . . .	.09½	.10
Salmon, Red—Cohoes or Silvers, lb.	.08½	.09
Salmon, Pale Qualla, dressed per lb.	.09½	.08
Halibut, white western, large and medium, per lb.	.08½	.08
Mackerel, Bloater, per lb.	.07	.08
Steak Codfish . . . . . per lb.	.06	.06½
Flounders . . . . . per lb.		.05
Canadian Soles . . . . . per lb.		.08
Blue Fish . . . . . per lb.	.18	.19
Striped Sea Bass, large . . . . per lb.	.17	.18
Striped Sea Bass, small . . . . per lb.	.12	.13
Sea Trout . . . . . per lb.	.10	.11

Frozen Fish—Lake and River.

White fish, large . . . . . per lb.	.10	.11
White fish, small Tulibees . . per lb.	.06	.06½
Lake Trout, large and medium per lb.	.11	.12
Dore, dressed or round . . . . per lb.	.08½	.09
Pike, dressed and headless . . . per lb.	.06½	.07
Pike, round . . . . . per lb.	.06	.06½

Pickled Fish.

Salmon Labrador Tierces 300 lb.	21.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C. Brls.	14.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs. . . .	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.50
Herrings, Labrador, Half Brls.	
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Lake Trout, Half Brls.	7.00
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Turbot, Brls.	
Tongues and Sounds, per lb.	
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs	1.25
Holland Herrings, imported milkers, half brls.	6.50
Holland Herrings, imported milkers, kegs. .	.75
Holland Herrings, mixed, half brls.	6.00
Holland Herrings, mixed, kegs	.65

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brl.	
No. 1 Green Cod, small, brl.	
No. 1 Green Cod, Haddock, medium, brl. . .	
No. 1 Green Cod, Haddock, small, brl. . . .	
No. 1 Green Cod, Pollock, medium, brl. . . .	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	7.00
Dried Pollock, medium and large, 100lb. bund.	7.00
Dressed or skinless Codfish, 100 lb. cases . . .	7.00
Boneless Codfish, Ivory Brand, 2lb. blocks, 20 lb. boxes, per lb.	.07½
Boneless Codfish, Dreadnought Brand, 2 lb. blocks, 20 lb. boxes, per lb	.06½
Boneless Codfish, strips 30 lb. boxes	.10
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes . . .	.13

Oysters, Clams, Mussels and Shell Fish.

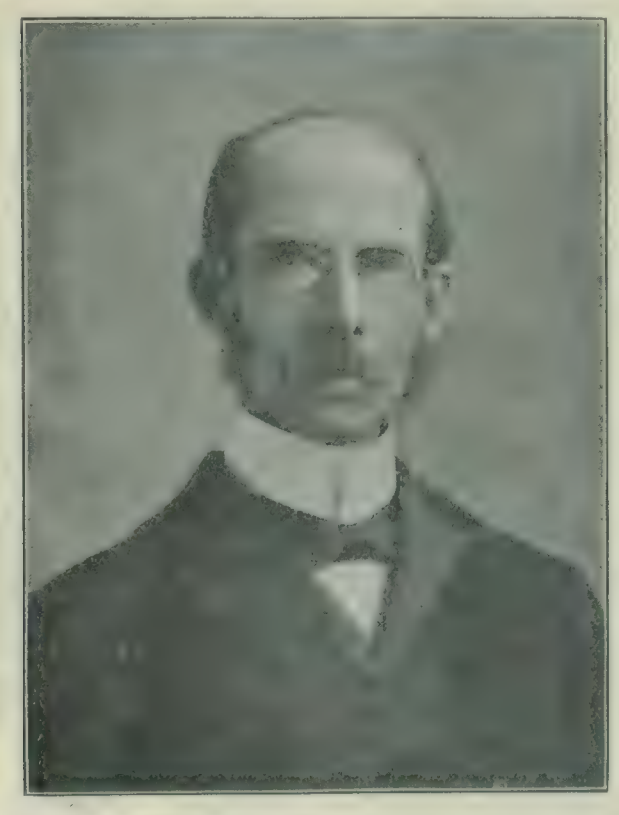
Cape Cod shell oysters, per barrel	8.50
Malpeque shell oysters, selected, C.C.I., per barrel	
Malpeque shell oysters, selected J.A.P., per barrel	
Malpeque shell oysters, selected XXX, per barrel	9.00
Malpeque shell oysters ordinary, per barrel . .	8.00
Malpeque shell oysters, caraquets, per barrel . .	5.00
Clams per barrel	9.00
Mussels, per barrel	6.00
Live Lobsters, medium and large, per lb. . . .	.30
Boiled Lobsters, medium and large, per lb. . .	.32

Famous T wharf is no more. Fish merchants of Boston moved over to the new Boston Fish Pier on March 28th, leaving none but the Italian fishermen at the old dock. It is said that the "Guinea" fishermen will use the Eastern Packet Pier if refused berthing at the new dock.

WHO'S WHO IN THE FISHING WORLD.

He has been within ten degrees of the North Pole; seen the midnight sun in Northern Greenland; entered the North West Passage; wintered in Hudson's Bay, and travelled all over the little known waters of our three coasts—North, East, and West. Yet in Mr. Andrew Halkett's appearance there is little to suggest that he has lived an adventurous life. Slightly built, studious, and particular of speech, one would never for a moment connect him with the little scientist who was picked up off the Alaska Coast adrift in a dug-out with two frightened Siwash Indians by the United States Revenue Cutter "Bear," during a blinding snowstorm. Yet in the capacity of a naturalist, Mr. Halkett has endured many hardships and taken many risks in order to obtain reliable data upon the flora and fauna of the Dominion.

Our Who's Who is the Curator of the Fisheries Museum at Ottawa, and Naturalist to the Department



of Marine and Fisheries. Like a vast number of prominent Fisheries men including Professor Prince, Mr. J. J. Cowie, Dr. Hugh Smith of the U.S. Fisheries Bureau, Mr. Andrew Halkett hails from Old Caledonia, having first seen the light in the ancient and honorable town of Brechin, Forfarshire, Scotland, on October 28th, 1854. His father was the Rev. Andrew Halkett, for many years minister of St. Andrews' Church, St. John, N.B., and his mother was a Canadian of United Empire Loyalist ancestry, hailing from Fredericton, N.B. It was after his father and mother sailed back to Scotland, that the subject of our sketch was born, which accounts for his being a Scotsman instead of a New Brunswicker.

Educated in the Grammar School of the old Scottish town, his boyish inclinations were early directed to the study of Natural History and he lived much in the woods and on the water making observations of birds, animals and fishes. Coming to Canada in 1873, the vast flora and fauna of the Dominion proved a veritable Eldorado to the young scientist, and for six years he travelled all over the country making a study of the varied animal life natural to Canada. In 1879, Mr. Halkett was appointed as Naturalist to the Department of Marine and Fisheries.

Since his connection with the Fisheries Department. Mr. Halkett has travelled extensively in order to acquire a first hand knowledge of Canada's fisheries. He has been upon the Atlantic and Pacific Banks aboard the vessels with the fishermen as well as with the netters of the Great Lakes. With the oyster dredgers and lobstermen he has worked to obtain scientific data, and among his many researches and expeditions are included an Investigation of the fur seal in the Bering Sea; researches concerning the natural history of the lobster in various localities in the Maritime Provinces; with the Neptune expedition to the northern seas and Hudson's Bay, besides a host of minor expeditions upon the fisheries of inland lakes and rivers.

At the Paris Exhibition, Mr. Halkett was in charge of the Canadian Natural History exhibit and received a diploma and medal. He also had charge of the Fisheries Exhibit at the last Toronto Exhibition, for which a gold medal was granted to the Department. As Curator of the Fisheries Museum at Ottawa, Mr. Halkett will always be found as a courteous and competent authority to all wishing reliable information regarding Canada's fish and fisheries.

The results of many painstaking labours and years of research has been embodied in Mr. Halkett's book entitled, "A Check List of the Fishes in the Dominion of Canada" recently issued by the Department. This handsome volume may be characterized as a Dictionary of Canada's Fishes. It includes 566 different species and gives the technical and common names of each, and the waters in which they are to be found. Everything with fins, scales and gills to be found in Canadian waters is enumerated in the book, and as a scientific record, it is one of the ablest and most comprehensive works ever issued by the Fisheries Department.

Though naturally precise in speech and manner, Mr. Halkett has a keen sense of humor and possesses a degree of vim and nerve not in keeping with his studious personal appearance—which all goes to show that appearances are deceptive. However, as Naturalist to the Fisheries Department, Mr. Halkett is the right man in the right place and a right good fellow among his many friends, and as Canada's representative Fisheries Magazine, the "Canadian Fisherman" is pleased to include him with the other notables in the Fishing World.

William J. Hackett, of 70 Long wharf, Boston, formerly of East Gloucester, has made improvements on his patent torch, that brings the article up to a high standard of perfection. The whole top, which includes the threaded lock nut and filler cap, is cast in one piece of heavy galvanized iron, doing away with all soldering on top, leaving nothing to melt from the heat of the blaze.

The keeper of the east light at Sable Islands reports being able to see the newly discovered island quite plainly from the light, according to information recently brought to Halifax by the Government steamer Stanley.

The haddocking on Brown's Bank during March has been a record breaker. A great fleet of Georgesmen have been making their sets on the Bank instead of on Georges. Most of the American vessels are manned and in many cases owned by Portuguese.

The Scotch Method of Smoking Haddocks

By HUGH M. SMITH.

(From U.S. Bureau of Fisheries Report.)

The haddock (Melanogrammus aeglifinus) is one of the most important fishes of Scotland. It represents nearly one-fourth the value of the entire fish production (excluding shellfish), and is outranked by no other species except the herring (Clupea harengus). In 1900 the haddock catch amounted to upward of 76,000,000 pounds, worth £502,660, or about $2,513,000. Aberdeen is the leading center of the haddock fishery. The quantity taken there in the year named was nearly 48,000,000 pounds, which was two-thirds the output of Scotland and exceeded by several million pounds the aggregate catch of haddock in the United States in 1898. Both lines and beam trawls are used in the haddock fishery, but the latter are by far the more important means of capture.

Haddock are landed on the Scotch coasts in a fresh state, and are then variously prepared for consumption. A favorite mode of treatment is smoking, and the principal place where smoking is done is Aberdeen, where the writer spent a short time in examining the methods of the haddock trade in the fall of 1900.

The fish smoked in the largest quantities and after the most approved method are known as "findon haddocks." Many changes have been run on this name in England, Scotland, and America, and many explanations of the name have been offered. This form of prepared fish originated many years ago in the Scotch village of Findon, not far from Aberdeen, when it was an important fishing center. Findon has now no fisheries, but its method of preparing haddocks is known and more or less correctly practiced on most parts of the Scotch coast, as well as in England, the United States, and the Canadian maritime provinces. "Finnan haddies," the usual form in which the name appears in print, is simply the Scotch for "Findon Haddocks."

These fish are universally popular; and although liberties have been taken with the method as originally practiced which have not been in the interest of quality, yet they are deservedly considered among the best of all smoked fish, as well as the most palatable of all haddocks.

The essential steps to which haddocks are subjected in course of preparation as "findon haddocks" are (1) splitting, (2) salting, and (3) smoking, the last being the most important.

The fresh haddock is first treated by removing the head, splitting down the back, eviscerating, and then giving an extra cut behind the backbone from the right-hand side, in order to expose to view and facilitate the curing of the thick muscles of the back. The supplementary cut does not extend to the tail. The fish is then salted for half an hour in strong brine, and after draining is ready for smoking.

The original "findon haddocks" were smoked by hanging them in a chimney, over a peat fire; but at this time none is thus prepared, unless it be for limited home consumption. Peat is still used for producing the heat and smoke, but the primitive chimney has given way to the specially constructed small smokehouse, in which the fish, impaled and spread open on sticks, are hung in tiers. The lowermost row of fish is only 1 to 2 feet above the smudge fire of peat mixed with sawdust, and the smoking is continued without interruption for five to six hours. During smoking the fish require constant attention, in order that the various rows may be smoked thoroughly, uniformly, and not too much. One of the most successful of the Aberdeen curers smokes his fish five hours, then washes them with a brush in clean salt water, in order to remove soot and other foreign matter that would detract from the appearance.

Findons are sent to market either in barrels or boxes. The barrels contain 150 to 160 pounds of fish, and are usually consigned to the commission trade. The best fish are put in boxes holding 40 pounds. They are packed in tiers, with their backs down, with the exception of the top tier. They are sometimes sold in bunches of three tied together by their tails.

Although the canning of "findon haddocks" is a technical paradox and a theoretical absurdity, yet in practice this is done for purposes of export. It is reported that the canned smoked fish keep for several years, but it can be safely asserted that no fish cured as "findon haddocks" should be, would keep for that length of time, and unless they are so cured they are not "findons." The excellent canned "findon haddocks," so called, prepared in the United States are thoroughly cooked in addition to being smoked, and often have considerable fluid in the can. It is a misnomer to designate such goods "findons."

Under the name of "smokies" small haddocks prepared in a special way are known to the Scotch trade. They are beheaded, opened along the abdomen and eviscerated, but are not split or spread. After a very short immersion in strong brine they are put on sticks and smoked over a hot fire with plenty of smoke until they have acquired a golden color. The smoking is done in a rectangular stone kiln, open above and with the fire at the bottom, the fish being hung quite close to the fire. A piece of burlap covers the top of the kiln when the smoking begins. Smokies are somewhat in disrepute because fish of poor or doubtful quality are sometimes so prepared; but when fresh fish are treated in this way they are very palatable. When the fish come from the kiln they are cooked as well as smoked, and are ready for immediate consumption.

Still another method of preparing smoked haddocks is pursued at Aberdeen and doubtless at other places on the north coast of Scotland. The fish are beheaded, split down the abdomen, and spread open by a single cut along the backbone extending out on the caudal peduncle, but there is no supplementary cut back of the vertebrae, as in the findon haddocks. The fish are salted for about twenty minutes in brine that will float a potato, and then very lightly smoked. Such fish are known as "pale smoked haddocks," and are, of course, intended for immediate consumption.

Haddock are prepared as "findons" at a number of places on our east coast. They meet with a ready sale and are justly regarded as among the most delicious of fishery food products. The trade therein should be largely increased at the expense of the trade in haddocks that are too often improperly designated "fresh." The methods of preparing findon haddock and other kinds of smoked haddock are applicable to small cod, hake, pollock and other gadoid fishes,

all of which may be made into wholesome smoked fish. The smoking and light salting to which they would be subjected would overcome the flat taste of such fish when eaten fresh. The smoking of the ground fishes generally would greatly promote the fishing industry in many of the towns of the eastern seaboard by opening new markets, by making possible the utilization of fishes for which there is only limited local demand in the fresh condition, and by preventing gluts which now so often occur.

Following is an instance of the losses resulting to the fishermen through inability to dispose of a large catch through the absence of a market for fresh fish. On May 10, 1901, the traps on the north side of Marthas Vineyard, Mass., were filled with pollock. The fishermen reported that more pollock were caught on that day than in the previous twenty-five years combined. It was estimated that not less than 25,000 fish were in the nets. Four or five thousand were shipped, but the market was flat and the shipments did not pay expenses; the other fish were thrown away. It is reasonably certain that if the fishermen had been provided with facilities for smoking or otherwise curing these fish they could eventually have disposed of them at a fair profit, especially if previous shipments of lightly smoked pollock had prepared the way for the larger catch.

Lent and the Fish Trade in Montreal

By J. A. PAULHUS.

Again this season, Lent has not disappointed the fish trade. Indeed, the distribution so far has eclipsed all records. During the past month the stocks held in fish warehouses were hammered at constantly, and with a vigor that kept help and office staffs working long over business hours—a whirlwind which taxed to the utmost capacity all the available resources of the traders and producers. The congestion of the trade, in certain downtown stores, was such as to interfere with general traffic and required the intervention of the police force to restore order and circulation. Particularly was this congestion felt around Bonsecours Market, and Bonsecours Street. Processions of vehicles laden with almost every known species of fish could be seen daily branching off in various directions. The country merchants from near-by villages could be noticed with a few barrels of fish held in amongst many other promiscuous cases. The fish pedler with his picturesque get-up mingling with the heavy sleighs of the cartage companies enroute to the railroad terminals, was quite as important as any of them in his own opinion. Then the city grocer or butcher in his up-to-date and trim sleigh, gave an intersting touch of color to this trade pageant. And each and every one of this busy crowd moved about, bent upon the same purpose, discussing, speaking loudly, harshly sometimes. The sounds of the vehicles, top-heavy, shrieking on the hard white snow. The voice of the bells on the harness; the tooting of the auto cars, all these sounds, though not harmonious to the ear, had some charm, however, for the interested observer, and proved beyond a doubt that Lent is again a factor in the trade acitivites, and has not lost any of its many old and welcome characteristics.

In the olden times Lent was so severe that flesh meat was forbidden during the whole period of abstinence. Fish was then used as a substitute, and from this started the trade which has since increased yearly. The Catholic countries of Europe were the first to introduce the exclusive use of fish during Lent. This form of diet is responsible for the developing industries of Norway, Holland and Scotland. It has often been quoted that the Catholic population of Europe has made prosperous and contributed to the wealth that has been drawn from the Baltic Sea since the days of the Norsemen.

A retrospective glance at this country will not fail to disclose that the fish interests were not of much concern until very recently.

The days are not very far when mostly all the fish consumed in this district was put up in the most promitive way for the general trade and distributed throughout the same style. The old city of Quebec was for a long time the distributing point of the product.

From the fishing grounds of Gaspe coast and Bay de Chaleurs, schooners were then making yearly calls with thousands of barrels of codfish and herrings. From there all the neighbourhood used to draw their supplies. By water route or by land, the salt or pickled fish would find its way to the storekeepers, who would make a provision in time, only in the season before the close of navigation or if by land, before the roads get impassable, or spoiled by the autumnal rainfalls.

Fresh sea fish from Portland and Boston would be imported in small quantities to supply the needs of a limited market. There was also the river frozen fish that would have to be provided for. As soon as the ice would form on the rivers, fishermen would set out their traps, and gather the precious fish food intended for Lenten season trade. The fish would be laid out during cold winter nights and when frozen stiff put aside until enough collected to warrant a sleigh drive to the nearest market. Not over 30 years ago, around on Bonsecours Market, one could see periodically just at the opening of Lent, a few of these fish folk offering to the consumers or the trader the finest specimens of our lakes and river finny tribe.

Much after the same fashion as farmers to-day at Christmas time bringing loads of turkeys and geese, these fishmongers would turn out invariably on Ash Wednesday, every year, from the remotest corners of the locality. In their picturesque garb of homespun clothes, mocassins and sash of bird colors, their presence was always welcomed, particularly their sleighhs, loaded up with riches of our teeming waters.

Dore, sturgeon, maskinonge—all these now-a-days luxuries—were then so abundant, and sold at a very modest price. But with the expansion of the country, the increasing demand population, many of our lakes and rivers could not stand the strain, and are nearly depleted.

New sources of supplies had to be found, new methods of fishing resorted to—more capital, more brain and energies vested into the industry in order to bring it to a successful issue.

With the opening of new territories, railroads were built, cold storage plants erected, and from ocean to ocean now, the products of both seas are distributed to the consuming masses of the Dominion.

The day is not far when the fish industry of Canada will be one of the basic industries of the country.

THE ATLANTIC FISHERIES

YARMOUTH, N. S.

(From Our Special Correspondent.)

With the month of March, the dull season in the fishing business is supposed to be over. The first thre months of the year are always more or less dull in this section of the province in the fishing business, that is in all branches except lobstering, and even lobstering shows a falling off in March. During the past five weeks in particular, the fishermen have had such weather conditions to contend with that they have not had for years. It has been winter weather of the real old-fashioned kind, during which the harbors and bays and all the sheltered waters where the lobster fishermen are to be found were frozen over solidly. Even at Seal Island, the very outermost point of Nova Scotia, the ice was so heavy that fishing was suspended for the first time in the memory of man. But the worst feature of all was the temporary suspension of the Boston-Yarmouth steamship service on account of ice conditions. This has not happened before in about forty years, so some idea can be formed from that as to the severity of the frost. For about two weeks there was not a crate of live lobsters shipped— and there were certainly not many crates caught. But still, in spite of all this, it is astonishing to know that the lobster catch has been the largest in years, which seems to disprove the statement so frequently heard that lobsters are growing scarcer every year. Up to March 18—the latest for which figures are available—the export had been 7.492 crates as compared with 6,693 for the corresponding period last year—a gain of 799 crates. But this does not represent the total catch by any means, as during the same period fourteen of the twenty-one canning factories in the county had been in operation and a total of 4,370 cases had been canned, made up as follows:—

91 cases ½-lb. flats in quarter cases).
3,127 cases ¼-lb. cans (in half cases).
873 cases ¾-lb. cans (in three-quarter cases).
2,130 cases 1-lb. and ½-lb. cans (in full cases).

These figures give some idea of the immense number of lobsters taken along the shore, even under the most unfavorable of weather conditions. During the balance of the season, with better weather, even this large catch should be increased.

There is not very much to report in the other branches of the trade. The uncertainty of transportation prevented several fair-sized fares being bought as if they had been acquired there was no certainty of being able to ship them.

Henry A. Amirault; one of the gentlemen largely interested in the Yarmouth Trading Compay, has decided to go into fresh fishing on a fairly large scale. He has six schooners here and has decided to put them all into the business. One of them, the Nathalie, made her first trip during the last week in March, and the second, the Nelson A., sailed today (March 30). The six vessels and their skippers are as follows:

Eddie James, Captain John Simms.
Nathalie, Captain Peter LeBlanc.
Nelson A., Captain Norman Robbins.
Edith F. S., Captain Eleazer Amirault.
Francis A., Captain Dennie d'Entremont.
Dawn, Captain William McNair.

The first three named will be engaged in halibutting and, as already stated, two of them are now in commission. The third, the Eddie James, will be in commission in a day or two. The three last named will be engaged in hand-lining and will go into commission some time this month (April). The Nathalie sailed on her first trip on Tuesday, March 23, and returned on the 26th, having only made one set. She took about a thousand pounds of halibut and fifteen hundred pounds of cod. The Nelson A. should be a top-noteher as she is manned by twenty Tiverton fishermen—and no better are to be got anywhere.

Two of the American schooners putting in here during the month landed sick men. Doucette, one of the crew of the Mildren Robinson, had his head cut open by a falling block, and John Johnson, of Everett, Mass., cook on the Ethel B. Penney, was seized with paralysis. Both were taken to the hospital, where the latter is still in a serious condition. Another Yarmouth County lad, Louis Amero, of Amirault's Hill, aged 18, was knocked overboard from the Gloucester schooner Arethusa, while in the Bay of Fundy, bound to the grounds. The mainsail was being lowered when a sudden slat of the boom carried him off the deck. Search was kept up for several hours, but in vain.

The exports during the month have been:

Live Lobsters, crates	1,590
Boneless Fish, boxes	6,884
Salt Fish, drums	4,674
Salt Herring, barrels	217
Pickled Fish, cases	386
Fresh Fish, cases	114
Smelts, boxes	370
Fish Waste, barrels	257
Canned Lobster, cases	115
Clams, barrels	471
Finnan Haddies, boxes	380
Salt Mackerel, barrels	269
Fresh Hailbut, cases	7
Cod Oil, barrels	15
Eels, barrels	11
Bloaters, boxes	540

Salmon, cases.
To Havana— 75 drums dry salt fish.
To London—128 cases Canned Lobster.

LUNENBURG, N. S.

(From Our Special Correspondent.)

The past few weeks have been a very busy time along the water front, caused by our fishing fleet being into the wharves and getting in shape for this season's work. Along the wharves of the different outfitting firms, from that of Messrs. W. C. Smith & Co. on the west, to Robin, Jones & Whitman, Ltd., on the east of the harbor, where

the vessels were lying three abreast of each other in the docks presented a lively and interesting scene.

During the past few days quite a number of the fleet have sailed for the fishing grounds, having obtained supplies of frozen bait from a vessel from Newfoundland, some from Halifax and some from Portland, Me., and between thirty and forty vessels have left up to the time of writing. We all hope to see fine weather and the fleet return during April with good catches, as the outlook for prices to be obtained for same is very encouraging.

Sunday, the 15th inst., according to custom, the clergymen of the different churches in town, held special services for those who were about to leave for their arduous calling on the deep, and it is needless to say that full congregations were gathered to listen to each of the preachers, who delivered appropriate sermons, with music, etc., suitable to the occasion.

About the first of the coming month the remainder of the fleet will be getting away, and they trust to procure fresh bait on our own shores. We trust their expectations will be realized and that all will obtain favorable catches between now and the 1st of June.

Lunenburg has the distinction of originating the most unique scheme of insurance in the Canadas, that is reputed to be the cheapest and best paying of any yet devised for the real benefit of the policyholders. The Province is noted for its lucrative fishing industry, which has its headquarters at Lunenburg, and which gives employment to some two thousand men, who at this time of the year leave for their annual spring trip to the fishing banks. To equip this fleet a large sum of money is required, and the way the money is raised is by the original scheme of insurance devised last year in the brain of a brilliant fisherman. Each of the 2.000 fishermen pay one dollar into a common fund, while each of the captains pay two dollars. The payment of the dollar makes the fisherman a policyholders and also shareholder. In case of the death of any members of the Association, the beneficiary receives $500. This low rate of insurance is explained by the fact that the Association is not loaded down by a board of directors drawing fat salaries, as the secretary and directors perform their services free, and the result is very satisfactory to the marine policyholders.

ST. JOHN, N. B.

(From Our Special Correspondent.)

Fresh fish dealers here have had much difficulty all winter getting supplies, and the Lenten season has accentuated their difficulties. Dealers in salt and cured fish have no stocks on hand to speak of, but the larger wholesalers have been able to get sufficient supplies to meet the needs of their regular customers. One dealer recently stated that he had never known such a shortage of fish of all kinds in St. John as there has been for some time past. Wholesale grocers who handle cured fish as a sideline have been at their wit's end to supply their trade. Prices are consequenetly high. In fact, for a year past prices in many lines in St. John have been higher than in the big fish centers of Boston and New York. This applies to prices paid the fishermen.

One wholesalers has recently imported a considerable shipment of fresh haddock from Boston, as he found it impossible to get fresh haddock in Digby. The American fish is about the same quality as that supplied by Digby vessels, coming mostly from Brown's Bank.

The harbor fishermen have begun erecting their weirs and fishing should begin about the first of April. The ice run of gaspereaux passed up the harbor a few weeks ago, but it was small, and no catches to speak of were made. Gaspereaux fishing opens the season here, the shad striking in in May and the salmon in June.

Fishery Lot on Navy Island Bar has been leased to Harry Belyea for the season for $251. Last year the city leased this lot for over $700.

The project of the St. John River Hydro-Electric Company to build a dam across the St. John River at Meductic, between Fredericton and Woodstock, has aroused the fishermen of the harbor, who claim that a dam across the river would destroy the salmon fishing in the harbor and at Dornville. A big delegation of fishermen recently went to Fredericton, and made a vigorous protest to the Legislature against alloging the company power to build the dam. The lumber interests are also opposed to the project.

SHELBURNE, N.S.

(From Our Special Correspondent.)

The reduction of the Modus Vivendi licence fee to $5 per vessel would, in the opinion of Mr. M. H. Nickerson, a competent authority upon fishing and fisheries, be one of the greatest boons to the port of Shelburne.

The situation of Shelburne would make it the natural and most easily accessible port for the American fishermen fishing on the western Banks. Here they could purchase bait, ice and supplies if we had the facilities, and with a steamship service to U.S. points, American craft could trans-ship their fares without making the long run from the adjacent grounds to American markets. Shelburne's citizens would reap the benefit in every way. Boxes for shipping fish would make a great business alone; men to pack the fares would be given constant employment on the wharves; the outfitters, ice and bait dealers, sail-makers and dory builders would also come in for their share. If the free fish tariff could revive the fish business in Yarmouth, the reduction of the Modus Vivendi would bring a new era of prosperity to Shelburne.

Two fine schooners for the LaHave fishing fleet have been launched in Shelburne within a week.

On March 27th the Carranza, built for Capt. Harris Conrad, took the water from the ship yard of Messrs. W. C. McKay and Son. She is 116½ feet long, 24 feet beam and 10 ft. 8 in. in depth of hold. Her registered tonnage is 125 tons.

The J. W. Margeson, launched April 1st, from the McGill Estate Yard, is 107 feet long, 23 ft. beam, and 9 ft. 9 in. in depth of hold. She registers 96 tons, and will be commanded by her owner, Capt. Joseph E. Conrad. This is the fourth vessel built in the McGill yard for Capt. Conrad within the past few years.

A three-masted schooner has been ordered for Newfoundland parties to ply between Nefoundland, the Azores and Portugal. She will be begun at once.

CANSO, N.S.

(From Our Special Correspondent.)

The months of February and March form a blank period for the fishing industry in this portion of Nova Scotia, so far as any financial receipts are concerned. Not until the first of April ushers in the legal lobster fishing season, does the business again take on an active aspect. Even then, on account of weather conditions, it is generally about the middle of the month, before much can be done. Yet the majority of the men are not altogether idle during this period. There is a

great deal of labor in connection with the fitting-up of lobster gear and those pursuing the lobstering make use of these months for that work. The netters also take advantage of this opportunity to repair nets and get things in shape for the spring schools.

The writer believes that the town of Canso took a big step forward when the citizens at a largely attended meeting on Monday March 9th, authorized the town council to borrow the sum of $15,000 for the purpose of installing an electric lighting plant. Judging by the experience of other towns, there seems good reason for believing that it will, after a time more than pay its own way. It will, we hope, prove a benefit to activities along the wharves and waterfront as well as a boon in other ways.

DIGBY, N. S.

(From Our Special Correspondent.)

March, 1914, goes down in history for its biggest importations of fresh fish to Digby for any month of March in the history of our port. The schooner Dorothy M. Smart has brought in three large trips from Browns, schooner Dorothy G. Snow has done the same. The other successful ones are: Schooners Albert J. Lutz and Loran B. Snow, and this week the Yarmouth schooner Kernwood has also landed her fare here.

The CANADIAN FISHERMAN is very popular in Nova Scotia and is rapidly growing in circulation.

As the following accurate figures will show, the schr. Dorothy M. Smart, in charge of Capt. William Snow, has made a record trip in the fishing business for the port of Digby and as far as can be learned for the Province of Nova Scotia, during the month of March.

Schr. Dorothy M. Smart, in charge of her high line skipper, sailed from Digby on Sunday, the 22nd inst., and returned to Digby Saturday morning, the 28th, with 100,130 lbs. of fresh fish caught in three days on Browns' Banks. These fish were purchased by the Digby Branch of the Maritime Fish Corporation, of Montreal. The vessel stocks in this trip $2,462.62 and the crew shared $65.00 each. This is the Smart's third trip of fish from Browns' during the month of March. Her total stock for this month is $7,736.88 and her crew have shared $205 each. The Smart's total stock for the season is more than $18,000.

Our other fishing vessels have also done well and the high liners for the month of March stand as follows: Schr. Dorothy M. Smart, Capt. William Snow; schr. Dorothy G. Snow, Capt. Ansel Snow; schr. Albert J. Lutz, Capt. Arthur Longmire, and Loran B. Snow, Capt. Arthur Casey.

The High Line Canadian Haddocker for March.—Digby Schooner, "Dorothy M. Smart," which stocked $7,736 within the month.

The schr. Dorothy G. Snow, Capt. Ansel Snow, which got away on her first trip in advance of the remainder of the fleet, is high line for the number of fish caught during the entire haddock season. The Dorothy G.'s fare, which was landed Monday, consisted of 59,800 lbs. of haddock, 7,200 lbs. of cod, 9,200 lbs. a shack.

The schr. Loran B. Snow discharged on her last trip 72,000 lbs. of haddock, 10,600 lbs. of cod, 4,450 lbs. of cusk, 292 lbs. of halibut. These two fares were purchased by Capt. Joseph E. Snow, owner of the vessels.

Schr. Kernwood has 65,000 lbs. of mixed fish, which is being landed for the Nova Scotia Fish Co.

The total fishing receipts for Digby, for this month, are reported by the wholesale fish firms as follaws: Maritime Fish Corporation, 317,644 lbs. of haddock, 40,013 lbs. of cod, 859 lbs. of halibut, 400 lbs. of hake, 1,200 lbs. of pollock, 21,600 lbs. of cusk, 1,800 lbs. of scrod and 100,130 lbs. of mixed fish; Joseph E. Snow, 291,900 lbs. of hadock, 43,800 lbs, of cod, 292 lbs. of halibut, 16,450 lbs, of cusk, 13,400 lbs. of shack and 85,000 lbs. of mixed fish; D. Sproule & Co., 22,200 lbs. of haddock, and Nova Scotia Fish Co., 95,000 lbs. of mixed fish.

The officers and members of the Western Nova Scotia Yacht Club held a successful dinner and smoker at the Waverly Hotel tonight. Among the members of this organization are Digby's most prominent wholesale fish dealers and popular skippers. Since its organization the Club has become very popular and its membership is made up from the best people of the town.

The stock of the schr. Dorothy G. Snow since Sept. 19th, 1913, to March 31st has been $20,966—a record which compares with the best high liners out of the United States fishing ports. The schooner is commanded by Captain Ansel Snow.

INGONISH, N.S.

The Gorton-Pew Company of Gloucester have begun operations at Ingonish. The steamer Hilford, arrived at Ingonish, bringing Mr. James Walsh, the representative of the big Gloucester firm, and Contractor D. A. Fraser, a native of Harbor Bouche, but for 35 years engaged in construction work in the United States in connection with fishing institutions. The cargo of the steamer was principally lumber and building material and supplies for the Company.

Mr. Fraser will at once commence the erection at Ingonish of a large store, fish house, warehouse and warf for the Gorton Pew people, who intend to operate on an extensive scale this year. This is the result of the successful business done by Mr. Walsh last season, who paid out to the fishermen of Northern Victoria County for his firm upwards of $30,000. That more money was not spent was owing to the fact that the Company had no storehouses to place the catch when shipments were impossible.

However, this will be avoided this year by the erection of a large storehouse and other buildings necessary to handle the immense business offering. It is expected the new structures will be ready by the time codfishing commences. Last year the first boats began work on the 20th of April, but even in this short space of time, Mr. Walsh hopes, by the aid of every available workman, to have the buildings well under way. Of course, houses for the workmen will also have to be provided. This is made necessary on account of the bringing from Newfoundland of some thirty or forty skilled splitters, etc., who will handle the catch of the local boats, of which there will be nearly double the number engaged last year. It is estimated that the total amount to be paid out at Ingonish this year by the Gorton-Pew people will run close to $100,000.

NEW BRUNSWICK NOTES.

(From Our Special Correspondent.)

It is reported that the Canadian Sardine Company will resume operations at its big plant in Chamcook, Charlotte County, this spring. The company was in financial difficulties last year, and, as sardines were very scarce its plant was closed down. Some weeks ago announcement was made that the company had secured financial accommodation, and the management have been arranging to start work again as soon as possible.

This company, which was organized by Sir William Van Horne and other C. P. R. magnates, evidently got in trouble because its plans were too ambitious at the outset; because it aimed at starting canning operations on a scale not at all warranted by its arrangements for securing supplies of sardines or other fish. But its affairs may eventually prove successful. The idea of the promoters was no doubt a good one. That idea was to put Canadian sardines in first-class shape. Complaints have frequently been made that the Eastport (Me.) canners put up sardines in an inferior condition, mainly to sell among the Italian population of the States, and that consequently the prices all round are low, and the American product made from Canadian sardines have no standing in the market. It is claimed that put up in first-class shape, Canadian sardines would meet the demands of a high class of customers, and bring high prices, to the advantage of the fishermen as well as all connected with the industry. The success of Connor's Bros. is an evidence of the possibilities of putting up sardines in first class shape.

The Dominion Government has agreed to pay the Provincial Government $66,382 in settlement of long outstanding fisheries claims. After Confederation the Dominion Government took from the riparian owners the right to control fishing in inland waters, but in 1882 the Privy Council ruled the fishery rights in inland waters belonged to the riparian owners. The Provincial Government, as riparian owner, claimed $140,000 as compensation for loss of right to lease fishing privileges on inland waters from 1868 to 1882. The Provincial Government has at last accepted $66,382 in satisfaction of the claim.

The Dominion Marine and Fisheries Department have been petitioned to meet a law, compelling the use of mufflers on motor boats in Charlotte County waters, in order not to frighten fish.

Inland fishing rights in New Brunswick are increasing in importance. In 1913 the local government received $23,525.58 from the sale of fishing leases and angling licenses, as compared with $19,700.50 in 1912.

Some sardine schools have appeared among the island of Passamaquoddy Bay, and the sardine fishing should begin about the first of the month.

A company is being formed to start the cultivation of oysters near the mouth of the Mirimichi, where some beds are productive and others barren at present. It is understood that the fishermen of the district are being invited to join in the enterprise.

A fishermen's union is being formed on the North Shore with the idea of demanding higher prices for their catches. Opposition to the plans of the men is likely to be made by the packers.

NEWFOUNDLAND.

Says the Trade Review:—

In accordance with their promise to the people, the Government have taken a first step in the direction of seeking new markets for our fish and fish products. We hear to-day that they have appointed Mr. Robert Moulton, M.H.A., to take a look through Canada and the United States, and report on the possibilities for marketing more of our cod-fish in these countries. We understand that Mr. Moulton will start on his mission about the middle of April, and will be away about two months, during which time he will gather the necessary information to report fully on the matter, and that they will willingly do so.

The supply of fresh fish available in the market since Lent came in has not been large enough to meet the demand, and lately some of the dealers have had to import fresh mackerel from Nova Scotia. There is something wrong somewhere, when the capital of a fishing country like Newfoundland has to send outside for fresh fish, and, as a people, we ought to do some tall thinking on this matter. It is a long time since we have had any mackeral in Newfoundland waters and though the people of St. John's are not particularly enamoured of the fish, yet there appeared to be a market for what are imported, and they readily sell for ten cents per lb.

Says the Twillingate Sun:—

Elsewhere in this issue we publish an item from the St. John's Herald stating that five new vessels all over one hundred tons are being built in Shelbourne, N.S.

It is a pity that this business has practically left this country, and our only building now is a few motor boats of 30 tons downward. There seems to us no reason these ships should not be built here, provided our builders are prepared to meet the demands of buyers. People who claim to know say that the life of a soft wood N.S. built vessel is not as great as our own local built. The only reason that buyers are going to Nova Scotia apparently is because they get more modern ideas incorporated into their vessels. That seems to be the great trouble with our builders. They can do good enough work, superior to other countries, but they want to build vessels in the style of 50 years ago. Consequently although buyers know they can get as good work at home they cannot get the style; and style is a mighty important thing nowadays.

HALIFAX FISH MARKET.

(Halifax Herald.)

FISH—Ex-Vessel.

Small dry cod	$6.50
Medium dry cod	6.50 to 6.75
Large shore cod	6.75 to 7.00
Bank cod	7.00
Haddock, dry, slack salted	4.25 to 4.50
Do. heavy salted	4.25
Cod oil (ex-vessel), per gal	.30
Pollock	4.25 to 4.50
Hake	4.00 to 4.25
Mackerel, large, per bbl.	10.45
Do. Medium, per bbl.	10.00
Fat herring, bbls.	4.50
Do. half bbls.	2.50

THE MOTORBOAT.

The increasing popularity of the motorboat as a pleasure and business craft is apparent wherever there is water enough to accommodate one. The swift and smooth-running vessel is to be seen on river and lake and along the sea coast and its devotees are growing in number all the time. In every shape, from the small motor-propelled skiff to the large family boat or freight carrier, this up-to-date vessel is giving satisfaction. It is easy to manage and with ordinary care seldom fails its owner. Its possibilities are only just beginning to be generally known.

It is of especial interest to Fisheries to take into consideration the great advantage derived from the adoption of auxiliary power. Especially from the view of the Canadian Fisheries; the free tariff into the States will mean a large increase of profits to our fishermen, but they must open their eyes to the necessity of availing themselves of modern equipment. Fresh fish commands the big price; and to bring the fresh fish to the markets means auxiliary power. An engine that is dependable in all kinds of weather, with a fuel that as to consumption and price is the most economical, is an absolute necessity for the future success of our fishing industry.

The journal, "Motor Ship and Motor Boat," tells of a voyage made by the motorboat Miri from England to Singapore in the winter months without any serious trouble. The Miri left its English port on November 19 last and sailed into Singapore on January 18, having covered 8,194 sea miles. The time under power was 52 days 10 hours, the average speed being 6½ knots. Frequently the weather was very heavy, but the boat behaved admirably all the way. On the completion of the trip the engines were examined and were found to be in perfect order. There were consumed on the voyage 34 tons of fuel, 16 gallons of kerosene and a half-gallon of methylated spirits. The consumption worked out at about 3½ gallons of fuel per engine per hour. The Miri's voyage was in truth a notable one for a new type of craft. The Miri was designed as a cargo and passenger boat and as a carrier of the mails, and was built to Lloyd's highest specifications. The hull is of Siemens Martin steel. There are five watertight compartments. The machinery consists of two sets of 80 b.h.p. Bolinders direct reversible oil engines, each running at the normal speed of 325 revolutions per minute on a listed fuel consumption of about 5½ gallons per hour though the actual consumption is less. The fuel tanks are fitted to give the vessel a radius of about 2,300 miles. The length of the Miri is 85 feet, the breadth 17 feet 6 inches, and the draught, moulded, 5 feet 6 inches. The passenger accommodation is arranged in a steel deck house forward, while the crew's quarters are immediately aft of the engine room space. Altogether the Miri is a businesslike craft that has proved its worth on its first long journey. The motorboat promises to be everybody's boat in time, for its operation is simple and easily learned.

A good idea of the fish traffic between Digby and the upper provinces is given by the shipments made from there during the month of March. The correct figures show that 410,000 pounds of finan haddies and 200,000 pounds of fresh fish went by the St. John boat to Ontario, Quebec and markets further west. Besides this, there were several big shipments of boneless dry fish. The demand for this kind of table fish is increasing every year.

Richmond Bay Oysters and Lobsters

BY D. K. CURRIE.

From many points of view there is perhaps not a more interesting sheet of water in Canada than Richmond bay, on the north side of Prince Edward Island.

This bay has, since the Island was first peopled, been a veritable storehouse for fish of various kinds—oysters, quahaugs, lobsters, eels, smelts and mackerel—the yearly harvest from all averaging about three-quarters of a million dollars. The oyster fishery has always been the most valuable. Recognized as the world's most luscious bivalves, a claim substantiated by the fact that they had been awarded first prize in competition with the world's oysters at many exhibitions, notably the Paris Exposition of some years ago, there was always a demand for them that could not be fully supplied and prices were generous, increasingly so as the years went by and the supply became shortened. Hundreds of fishermen were engaged annually in the industry and many private fortunes were built up on this foundation alone.

But constant reaping without sowing finally produced the inevitable result and of late years it was recognized that, unless steps were taken to prevent it, the end of the oyster industry was in sight. Many attempts were made by succeeding governments to ward off the inevitable, but it was not until the present administration came into power that the divided jurisdiction between the federal and provincial governments was so adjusted as to give the latter complete control over all inland wateres. This secured, the provincial government at once set about to arrange a system of conservation and cultivation and now the depleted oyster beds in Richmond Bay are already in a fair way to become productive areas with illimitable possibilities for future development.

Of the thirty thousand acres in the Bay, some five thousand acres have already been leased to development companies and, last year, many thousands of barrels of seed oysters were planted and large tracts of bottoms were cleaned up and prepared for further planting. Two of these companies have this work now well under way. With specially built oyster boats, capable of fishing forty to fifty barrels of oysters an hour, planting some hundreds of barrels of shells a day, dragging and cleaning up bottoms, etc., the prospects for the future are exceedingly promising, and it is not too much to expect that within the next few years the cultivated areas in Richmond Bay alone will yield a larger annual return than all the waters of the Island have ever yielded.

The one great enemy of the oyster is the star fish, and against this pest the companies are turning all their ingenuity. The oyster boats are provided with large sweeps, drags made up of a net work of twine and marlin; these sweeps are dragged regularly over the beds and hundreds of star fish are thus captured and destroyed. On the public beds, in which no other interest is taken than the reaping without-sowing method followed by the private fishermen, the star fish is working havoc unmolested and the probability is that within a short time the few remaining oyster on these unprotected areas will have disappeared, if nothing is done to prevent their destruction by their natural enemy.

Experienced fishermen and those who have made a study of the conditions obtaining in the bay, claim that there is a remedy, one that will not only save the oysters from extinction but will be the means of fostering another almost equally valuable industry—the lobster fisheries.

Before the days of lobster trap-fishing Richmond Bay farily teemed with lobsters. Its shallow waters and the hundreds of acres of sea-weed bottoms furnished the lobsters with ideal spawning grounds; the lobsters' great enemy, the cod fish, never found entrance to the bay and the lobsters grew and multiplied unmolested. They fed largely on the star fish; they were the natural scavengers of the bay and they did their work effectively.

But this Eden-like condition was not to last indefinitely. Trap-fishing, with all its modern improvements has depleted the lobster business and in late years the catch has decreased almost to the vanishing point.

The remedy proposed is to prohibit lobster fishing in the bay for a terms of years and the confident belief of those who claim to know is that in a few years the lobsters will have so multiplied as not only to be able again to hold the star fish pest in check but to so abound as to overflow into the outer waters and supply the whole coast with lobsters.

There are several lobster factories around the bay with some thousands of traps covering the whole ground. The proposition is that the government should buy up their vested interests and close the bay for lobster fishing for a term of years. In past years the bay proved itself a natural nursery for the lobsters. There is every reason to believe that if used as a nursery, equally satisfactory results would again obtain.

The experiment is well worth trying and, if as is believed, it proves successful, the double object will have been secured, namely the propagation of the lobsters and the salvation of the oyster through the destruction of its enemy, the star fish.

Great hopes are entertained for the future of the oyster business. Within the past few weeks another company has been organized with a capital of $100,000 making the third large company now in operation, besides several others in process of formation.

FISHERIES SCHOOL.

It is expected that before long a school of fisheries will be established at the University of Washington. If the plans for one mature, the resulting school will be the first school of its kind in the United States. It will be modelled to some extent after schools of this character at the University of Tokio, Japan, and in institutions of higher learning in Sweden, France and Ireland. One of the most important problems to be solved from a commercial standpoint will be the transplanting of the Eastern oyster to the waters of the Pafic and of Puget Sound. The Eastern oyster never has been successfully grown here.

H. M. Smith, United States commissioner of fisheries, is urging President Landes of the university to give this matter his most careful consideration. A convention of the fisheries interests is to be held in Seattle soon, and the university expects to get some definite suggestions as to the kind of school which the fishing men think should be established.—Gloucester Times.

THE PACIFIC FISHERIES

The Canned Fish Trade in Great Britain

Writing from London on March 9th, the Canadian Trade Commissioner, Mr. Harrison Watson, in his report published March 30th, states:

In accordance with instructions inquiry has been made into the possible effect of the recent short catches of sardines in Norway and elsewhere upon the canned fish import trade of the United Kingdom, more particularly with a view of ascertaining whether this shortage is likely to create an increased consumption of the cheaper grades of British Columbia canned salmon.

In this connection a number of the principal firms who handle canned fish of all sorts have been interviewed, and newspapers associated with the trade have also been consulted, with the object of supplementing personal knowledge by the views of experts thoroughly conversant with every feature of the trade in sardines, salmon, and other canned fish which come into this market.

Sardines and Salmon Competition.

There is a general concensus of opinion that, as far as the United Kingdom is concerned, there is little or no connection between the consumption of sardines and of salmon, because they are used for quite different purposes. Sardines, although a favorite article of food and imported in large quantities, are generally regarded as a delicacy or relish, while canned salmon has assumed a definite place as a staple article of food with the middle and working classes.

While it is probable that the increased cost of sardines would cause a falling-off in the consumption of that particular fish, there is nothing to show that this would create any definite increased demand for canned salmon, and several members of trade have expressed the opinion that as a rule when the sardine catch fails in certain districts, the fish can be obtained from others, even if at a greater cost.

Present Trade in Canned Salmon Good.

It is certainly true that for some time past the canned salmon trade has been in a buoyant condition, but this state of affairs is quite unconnected with the sardine shortage.

The principal and permanent cause is the steady rise in the price of fresh and canned meats, for which a certain section of the population has gradually adopted canned salmon as a cheaper and efficient substitute.

Another, and more temporary, influence which is responsible for the high prices ruling is the succession of several years of short production which preceded last season's "big run." The steady and established consumption gradually exhausted available supplies, until last year the prices for the best quality salmon were forced up to an abnormal level, well over 40s per case (4 dozen cans) being paid in London in some instances.

When the volume of last season's large "run" became known, dealers at once reduced their figures to meet the large shipments which were to be anticipated, new supplies being quoted at 26s to 27s. It speedily, however, became apparent that the protracted shortage had exhausted stocks everywhere, and the market being practically bare, prices began to advance again, and at the present time there is a steady and large trade being done, quotations from the current number of the "Produce Markets Review" for best quality of red salmon being 30s to 31s for talls, 30s to 34s 6d for flats, and 42s to 43s per case for half-flats.

Large Consumption Likely Permanent.

There is every reason to anticipate that large consumption of canned salmon will continue and even increase, and as following the law of averages, large "runs" of salmon on the Pacific coast only occur at intervals of several years, comparatively high prices seem likely to be maintained.

The variety which has established the popularity of British Columbia canned salmon, and which continues to find the most favor is the red sockeye fish packed in 1-lb. and½-lb flat tins and 1-lb. tall tins, and the opinion is held that there is little possibility of an increase in the supply of this grade.

Growing Popularity of Alaska Red Salmon.

Next in favor comes what is known as "Alaska red" —mainly packed in 1-lb. tall tins—which includes several grades and which at the presnt time is valued at anything from 4s to 7s a case less according to quality and owing to the high price of British Columbia red and the gradual improvement in packing methods, the sale of the Alaska fish has attained large dimensions, and it is now becoming a severe competitor with British Columbia red fish in the same package.

The existing state of affairs should point theoretically to better prospects for cheaper grades of canned salmon from British Columbia, but repeated attempts which have been made to introduce British Columbia so-called "pink" salmon have so far been disappointing.

Pink Salmon not Popular.

One principal cause is not only curious, but possesses an ironical side. The flesh of the British Columbia sockeye and similar salmon is much redder than that of the Scotch, Dutch, and other salmon which are com-

mon in this country, and this feature proved a great obstacle when canned salmon was first introduced to this market.

Shippers, dealers and all associated with the trade conducted successive campaigns of missionary work with the object of impressing upon the consumer that that redness of the fish was not only an excellent point, but a proof of the high quality of the fish as compared with inferior and paler varieties.

When looking over a few days ago the labels of a number of brands of canned salmon handled by one of the largest dealers, it was pointed out that colour emphasizing the redness of the fish was the chief feature of each label, and indeed the general effect upon the eye was that of a collection of danger signals. In the contents, not only is the fish deep red, but also the oil which gradually oozes from it.

Now that efforts are being made to sell the pink variety, which is really more similar in appearance to the salmon known in this country, the consumer, after opening the can and finding that the fish is quite pale in color and that the little oil with it is almost colorless, immediately jumps to the conclusion that there is something wrong with the fish, and as a rule is unwilling to have anything to do with it.

The conservatism of the British public is proverbial, and from past and present experience, many in the trade here are inclined to doubt whether pink canned salmon will ever establish itself in popular favor in these islands; indeed, the majority are far from sanguine. This view is certainly supported by the fact that at present pink "talls" are realizing only from 13s to 14s per case.

For these reasons the opinion is held by several authorities that it is the Alaska red salmon which will derive the chief benefit from the present situation.

Complaints of Bad Packing of Cheap Grades.

However, cheapness is a very important factor in this country, and while it is improbable that the pink grade will ever attain the popularity of the red, it seems clear that an important reason for its lack of favor up to the present time has been careless and inferior packing. Practically all firms who have handled British Columbia pink report that many tins are very badly filled and light in weight, and that when the contents are turned out they are quite soft, and the general appearance unnecessarily unattractive.

It is consequently possible that if British Columbia packers would improve their methods of packing the pink variety, a great deal of existing prejudice would be removed, and in time a special and steady opening be created for these cheaper grades.

In confirmation of this, it is well known that there is an enormous sale in America of pink fish, and with the prices of the best class canned salmon likely to remain permanently high, there certainly exists a definite demand for a cheap article which provides an alternative and substantial form of diet to the poorer classes in this country, to whom price is a chief consideration.

There is, moreover, reason to suppose that the position has been aggravated by some of the United States and Canadian packers taking advantage of the short supplies of salmon generally and the high prices ruling, to ship very inferior and carelessly packed consignments of pink salmon, which, under ordinary circumstances, would never have been put up.

Views of London Trade on Pink Salmon.

In view of the importance to British Columbia packers of developing a market for these lower grades of canned salmon, I have considered it advantageous to obtain the opinions of several of the large dealers, and as they have been good enough to put their views into writing, the following extracts are reproduced, under the impression that they correctly represent the attitude of the trade in this country:—

"1. The cheaper kinds such as pink fish, etc., have not up to the present found much favor, as on account of buyers having been previously educated for red fish, they do not like the pale varieties.

"In several instances where an enterprising distributor has offered the pink salmon as pale fish his sales have steadily increased, but where the goods have been offered without describing the grade, sales have been disappointing.

"In 1911 owing to the high price of red salmon, a large quantity of both British Columbia and Alaska pinks were shipped to the United Kingdom, in fact the demand in this country for forward delivery was so heavy that packers had great difficulty in meeting the inquiries. We are afraid rather than miss the business, many packers shipped "chum" fish under pink label, and as chum is the lowest description of pale fish caught it had a very detrimental effect on the sale of pink salmon in this country. It would have been far more satisfactory for all concerned if the packers had turned down orders instead of executing them with inferior fish.

"2. Concerning pink salmon, usually described as "humpbacks," the writer might say that he was chiefly instrumental in getting the sale of these pushed in this country. Up to a few years ago the sale in America was chiefly confined to the black population, but when there in 1909, the writer was informed that the trade in Amrica was being extended among the poorer classes in the eastern States, and he was specially desired to do all he could to create a trade for this class of fish in England.

"He found a good deal of opposition at first, as many of the large wholesale houses thought it would spoil the trade in sockeye, while again many grocers on receiving deliveries of pink salmon returned the goods owing to its very pale colour.

"We are pleased to say, however, that the trade is steadily growing and in our opinion it can be made a very large trade indeed, but only provided the packers will give the same care in the packing to this grade of fish as they would with sockeye. The writer impressed this very much on packers when he was on the Pacific coast last year, and he also pointed out most strongly the great damage which had been done in the building up of this trade through the rubbish which was packed and shipped here of the 1911 pack, chiefly by the Alaska canneries. The opening price that year was an absolutely high one, viz., $1 per dozen f.o.b., and this tempted packers to put up all they could, and many parcels were packed so very carelessly that when they were distributed in this country troubles arose, and it was the means of many grocers giving up the sale of pink salmon.

"We would express the opinion that humpbacks should not be packed on the Fraser river, at least not for shipment to this country, as the quality is not good enough, and they would only do harm if distributed. On the other hand Skeena and some other northern rivers pack excellent quality of pinks and such quality will do much to popularize this grade.

"3. The dealers here in canned products have their eyes wide awake with regard to selling pink salmon. This salmon unfortunately has not always been satisfactory in quality and consumers have been satisfied with one tin only in a great many cases. We believe that both the packers and the distributors are well aware that only best pink salmon can sell in this country, and we think that after the bad impression mentioned above has been removed, the trade will increase, more particularly if red salmon keeps up in price, as it seems very likely to do."

It is worth noting that I was shown by one of the large houses a flat tin of pink salmon packed in Siberia, which was attractively labelled and was stated to have created a good impression. A sign of the times is the constant cropping-up of Siberia in this country as a producer of goods in which Canada is interested, and in many of which there are indications that she will become a keen competitor in these markets in the future.

Statistics of Canned Fish Imports.

In conclusion, as an indication of the extent of the trade, it is interesting to reproduce the official statistics showing the imports into the United Kingdom respectively of canned sardines and canned salmon, indicating their origin, for the past three years (1911, 1912 and 1913), also noting the average figures during the same period for canned lobsters and canned fish, unenumerated, the remaining sub-divisions which in the Board of Trade returns cover the whole trade. It should be mentioned that full details regarding 1913 figures are not yet available.

	—Quantities.—			—Values—		
Countries—	1911.	1912.	1913.	1911.	1912.	1913.
Canned sardines—	Cwts.	Cwts.	Cwts.	£	£	£
Norway	97,641	114,810	127,036	288,907	365,781	415,376
Germany	695	276	.....	2,102	780	.....
Belgium	761	979	.....	2,002	2,811	.....
France	17,027	11,496	20,109	72,023	50,124	93,841
Portugal	143,143	115,903	133,249	397,166	318,193	363,884
Spain	6,431	1,652	.....	16,914	4,485	.....
Other foreign countries	346	1,051	.....	856	2,554	.....
British possessions	.....	31	.....	.....	49	.....
Total	266,044	246,198	295,220	779,970	744,777	912,124
Canned salmon—						
Sweden	226	178	.....	3,072	2,162	.....
United States	226,789	125,206	265,817	630,071	386,696	698,018
Other foreign countries	4,283	17,903	.....	9,167	47,030	.....
Canada	169,070	211,616	275,362	586,194	723,698	900,068
Newfoundland and coast of Labrador	616	429	.....	1,099	766	.....
Total	400,984	355,332	604,339	1,229,603	1,160,352	1,775,518

	Quantity.	Value.
Canned lobsters—		
Average for the same three years	37,350 cwts.	£333,207
Canned fish (unenumerated)—		
Average for the same three years	61,908 cwts.	£186,068

The total figures (unrevised of imports of canned fish of all kinds into the United Kingdom during the year 1913 aggregated 1,005,023 cwts. (112 lbs.) valued at £3,232,287.

Under the date of March 10th, the Canadian Trade Commissioner at Bristol, Mr. E. D. Arnaud, reports:—

The following extracts from a letter received from a well known produce merchant of this city ,are submitted in confirmation of the statements contained in a report on the above subject, dated the 5th instant:—

"It is true that the shipments of Norwegian sardines have been very much reduced on acount of the small catch of fish, but I am of the opinion that there were very heavy stocks in England and elsewhere, which this shortage has enabled holders to sell, but the result has been that the shortage has been little felt, if at all.

"With regard to the prospect of British Columbia fish, in tins, last year the pack of salmon was one of the biggest on record, but in spite of it prices are very firm, and the stocks in first hands are almost cleared. Already much higher prices are being booked up for 1914 pack, and we have been quoted for the best Fraser salmon 42 s for ½s, and 35s 9d for 1-lb. flat tins. Thinking the matter over, these prices do not seem unreasonable, although, of course they are very much higher than the average, in fact I believe I am right in saying that they have been only once exceeded and that in 1912, when almost everybody who bought lost money. At the same time, the market is firm here for ½s, at from 39s to 40s and if the pack of Fraser in 1914 is only about 300,000 cases as anticipated, it is not unreasonable to expect that the prices will be 2s to 3s higher than at present, so that it would appear that the demand for fish in tins, next year may be unusually good.

"In this district we do not handle much of the "pink" variety of salmon, and anything of a low grade meets very little demand, but undoubtedly this cheaper salmon is being well introduced into other parts of England."

CANNING THE TUNA FISH

A NEW INDUSTRY WITH A PHENOMENAL GROWTH.

BY F. J. HAYWARD.

Whilst living on the Atlantic coast one of our diversions on fine days was to chase and harpoon what we called th. "horse mackerel." We always understood that this was of the same species as the "tunny" fish or "tuna" fish that gave such sport to the wealthy anglers who flock to warmer climes in the winter. Whilst we envied them with the big fish at the end of their line, still we were satisfied that the sport we got was almost as good. What is better than to be towed in a large sealing punt with the sun making the tar run all over the place? The gasoline engine was in those days in its infancy, so we felt that we were going one better and harnessing the sea.

But the Pacific tuna fish, whilst still of the mackerel tribe, seems to be a far more delicate fish than its Atlantic cousin. The flesh is whiter and more tender. Properly prepared this fish has been time and again mistaken for chicken. This is one of the reasons why we call it the Pacific chicken.

Canning this fish has become a very large industry in California. Considering the short period—really about three years—since the canning of tuna fish was put on a commercial basis, one can safely say that there is no other form of canned food that has taken a hold on the public as this has. It has not been advertised except by word passed on by those who wish to do good to their friends and give them a treat.

The average weight of the tuna fish caught principally around Catalina Island, off the coast of California, runs to between 30 and 35 pounds. There are four species, the Leaping Tuna, Bonita, Skipjack and Albacore. It is the latter that is used mainly for canning owing to its delicacy and whiter meat.

Like the oyster, the tuna fish is a most dainty eater. They will have nothing but live fish, the usual baits being sardines, small mackerel, herrings and anchovey. Dead bait fishing is only a waste of time. For this reason all boats fishing for tuna have to carry live bait, and all fish is caught by hook and line. In fact, to attract the fish, corn meal is often thrown on the water; in just the same way that we used to put meal in the holes when we were fishing through the ice .

As soon as caught, the fish is cleaned and headed. At the cannery it is cooked immediately on being landed This is to free the fish from the oils that really make for the "fishy" smell in all fish. After cooking the skin, bones and darker meat are removed, and the second cooking takes place after the fish is placed in the cans.

Nothing can be cleaner or more hygenic than the process now adopted for the canning of tuna fish. Every detail has been thoroughly looked into, and this accounts for the extraordinary rapidity with which this canned fish has found favour all over the continent. Even the oil that the fish is packed in has had attention. It has been found that using pure olive oil tends to make the fish "stronger" with age. To this end, a mixture of salad and olive oils has been generally adopted now.

If the reader seeks to buy a can of tuna fish let him see that the fish is white. A pinkish color indicates the presence of blood, and this means improper cooking and draining.

As a substitute for salmon, tuna fish was never put on the market. It is bought on its own merits alone, having a distinctive flavor that is most appetising. It is even said that in California one always looks for the "drum stick" when ordering chicken now owing to the fact that unscrupulous restaurants now serve up tuna fish instead of the real thing.

THE PACIFIC FISHERIES SOCIETY.

This is a society lately organized in Seattle, Wash., and is the only one of its kind on the Pacific Coast. The object of the society is to promote fish culture and the study of fish foods. Besides the backing of the United States Government, most of the prominent fish experts and canners have associated themselves with the organizationu. This will ensure every assistance being given and useful work being accomplished.

ANOTHER NORTHERN PLANT.

The Skeena River Syndicate which has been organized for some time, but as yet has practically done no fishing, has been taken over by the Skeena River Fisheries, Limited. The manager is Mr. W. R. Greenwood, well known in newspaper circles in Toronto and Eastern Canada. The capital invested is mainly derived from England, showing that investors in that country still have faith in the British Columbia fisheries, notwithstanding some unfortunate happenings of the past few years.

The plant of this company is directly on the main line of the Grand Trunk Pacific, a few miles out of Prince Rupert. The new fishing plant and additional cold storage will shortly be completed, and the company expects to have a capacity for 2,00,000 lbs. of frozen fish.

HALIBUT.

There have been several arrivals of fresh fish of late, but it looks as if some of the vessels will tie up until the stocks of frozen halibut are reduced. For some reason, the consumption of fish this past season has not been up to expectation. Whether it be the cry of "hard times," it is difficult to say. At all events, Canadians are not eating the fish that they ought to. A local paper had a paragraph lately to the effect that one well known cattleman prophesied that beef in a few years will be retailing at $1.00 per pound. Why this should be, with all the fish foods offering of equal sustenance properties as meat, is only up to the consumer to say.

CAVIAR.

With the arrival of the sturgeon there seems to be a stir in this commodity. The lack of expert preparing does not allow the high prices to be fetched as would otherwise be obtained.

Experiments are still being made with preparation of salmon eggs. There is a sufficiently attractive market offering for this to warrant time being expended on the industry.

NEW FISHING AGREEMENT.

Seattle, Wash., is the headquarters for the Pacific Halibut Fishermen's Union. The arrangement so far has been where fishing has been done from dories, each dory takes its own fish. The Canadian Fish and Cold Storage Co., of Prince Rupert, has now done away with the dory fishing, so the Union had to make new arrangements.

It is now agreed that where fishing is to be done from the vessels with long lines, the crew to be carried is to be twelve in number, and the catch to be divided equally amongst the twelve at one and a quarter cents per pound. The captain does not share in the catch, but one of the twelve acts as mate.

A branch of the Union is to be formed in Prince Rupert, the headquarters at Seattle controlling Prince Rupert, Haysport and Ketchikan. The strength of the Union is now 1,500 members.

FRESH SALMON.

The "springs" are coming along now and are a bit ahead of schedule. One shipment of 10,000 came into port a few days ago, and quickly taken up by the Canadian Fishing Co., Ltd.

The halibut schooner "Jessie," of Victoria, B. C., has had her turn of bad luck of late. She was out on the banks, struck bad weather, and had her owners somewhat anxious as nothing was heard of her for about five weeks. Amongst the boats looking for her was the new motor life-boat lately built in Vancouver. When the "Jessie" did reach her home port, her whole cargo had to be condemned owing to the length of time that it had been in her hold.

STURGEON.

Several of these fish are showing on the Fraser River. Fishermen netting for spring salmon get some of these valued fish daily. At New Westminster sturgeon may be purchased at anything from 11c. to 15c. per pound, in the round.

WHOLESALE FISH PRICES, VANCOUVER, B. C.

(Quoted by London Fish Market Co.)

Smoked Fish.

	Per lb.
Finnan Haddies, 15 and 30 lbs	.09
Haddie Fillets, 15s	.10
Eastern Bloaters	.07
Local Bloaters	.06
Kippers	.06
Salmon	.14
Halibut	.11
Cod	.09
Kippered Salmon	.12
Kippered Halibut	.12
Kippered Black Cod	.12

Frozen Fish.

	Per lb.
Salmon, Steelhead, dressed	.09½
Salmon, Cohoes, dressed	.07
Salmon, Cohoes, round	.06
Salmon, Qualla, dressed	.05
Cod	.05
Halibut, Chicken and Mediums	.06
Smelts, local	.05
Oolachans, local	.05
Soles	.05
Flounders	.03
Perch	.05
Herring, local	.03
Black Cod, Alaska	.08
Mackerel, Eastern	.12
Shad Roe	.20
Whiting	.03

Pickled Fish.

	Per lb.
Salmon, Sides, barrels 200 lbs	.10
Salmon, Bellies, barrels 200 lbs	.12
Black Cod, Alaska	.08
Dried Hake, 100-lb. drums	$7.50
Eastern Salt Cod (whole fish)	.08
Western Salt Cod	.07
Oolachans	.07
Mackerel, Eastern Special per bbl. 200 lb.	$27.00
Mackerel, Eastern, 190 count	$22.00
Mackerel, Irish, 340 count	$20.00
Herring, Large Eastern, per half bbl.	$5.50
Herring, Holland Milchers, 10-lb. kegs	.95
Herring, Holland Mixers, 10-lb. kegs	.85
Herring, Local	.07

Prepared Fish.

	Per lb.
Boneless Cod, Acadia, 2-lb. boxes	.14
Boneless Cod, Acadia, strips, 30-lb. boxes	.13½
Boneless Cod, Bluenose, 2lb. & 1-lb. bricks	.09½
Boneless Cod, Pilot, 2-lb. & 1-lb. bricks	.08
Boneless Cod, Pacific	.09
Boneless Bricks "Nova Scotia Turkey," 2-lb. bricks	.07¾

Fresh Fish.

	Per lb.
Salmon, Spring	.12
Halibut	.05
Cod	.05
Smelts	.06
Herring, Local Point Grey	.03
Soles	.05
Whiting	.06
Oolachans	.06
Skate	.03
Perch	.04
Rock Cod	.03
Red Cod	.03
Sea Bass	.04
Black Cod, Alaska	.08
Shad, Columbia River	.08

Shell Fish.

Crescent Point Oysters, per case	$6.00
Crescent Point Oysters, per doz.	.24
Eastern Oysters, bulk, per gal.	$3.00
Eastern Oysters, Sealshipt, per gal.	$3.00
Eastern Oysters, Sealshipt, quart cans	.75
Olympia Oysters, per gal.	$3.25
Deep Sea Crabs, per doz.	$1.00
Shrimps, per lb.	.08—12
Prawns, per lb.	.18
Clams, per lb.	.03
Clams, shelled, per gal.	$1.25

CANNED SALMON.

Prices are same as reported in March issue, with a sharp rise due. This is owing to the fact that English buyers are very keen and quite a quantity of the 1914 pack of sockeyes have been placed for August-September delivery at $9.50 to $9.60 per half-pound flats.

Other than this the business done has been fairly normal.

We kept "Salmon" Day along with our friends across the line, and many of the leading grocers made a specialty of this. The idea seems to be an excellent one, and if a yearly affair Canada will take it up also in the same way that the United States did.

General Remarks.

Business during March has not been as brisk as one would imagine, especially in view of the fact that we are right in the midst of Lent, which is essentially a fish season. But we on the Pacific slopes seem to be an ungodly crowd that is if sanctity depends upon the amount of fish we consume in the season of Lent. Glancing over the files of Eastern papers we understand that Vancouver and the Coast cities are in a bad way. But if one can judge by the way people eat and dress, there is nothing to worry over—except that fish is not eaten enough.

All the canneries are now getting ready for the summer catch. Several of those which operated last season will not do so, as the sockeye run will not be anyway near that of last year, which was one of the "big" years. The other grades are not affected except the "humps," so the run will be as normal as conditions will allow.

The weather on the Sound has been all that one could desire for the past few weeks. Even straw hats have appeared and overcoats generally discarded. Inshore fishermen (by these we mean those who fish for all but the halibut) certainly have not the weather conditions to contend with as are experienced on the Atlantic. The grounds for the cod, herring, sole, etc., etc., are practically land-locked, and running for shelter is a very rare event.

Reports show that the luscious Finnan haddie is almost at a premium in th East. Buyers here placed orders early in July last, and also at the time of the low offerings. The result is that the supply in the cold storages is ample, and that advances are not happening here as in the East. Many jobbers are sending parcels almost daily to some of the Sound cities, and Canadian haddies may be seen displayed at all the better class stores there now.

ALASKAN SALMON CATCH AMOUNTS TO SLAUGHTER.

Washington, April 3. — Delegate Wickersham, of Alaska, told the House Territories Committee to-day that unless quick action were taken by the Government to prevent ruthless slaughter of salmon in Alaskan waters, there would not be a salmon left along the territory's coast. He said the trap nets used on the Alaskan coast were so numerous that the pools looked like forests, and the fishermen sallied out to sea in power boats to take the salmon before they got near the shore.

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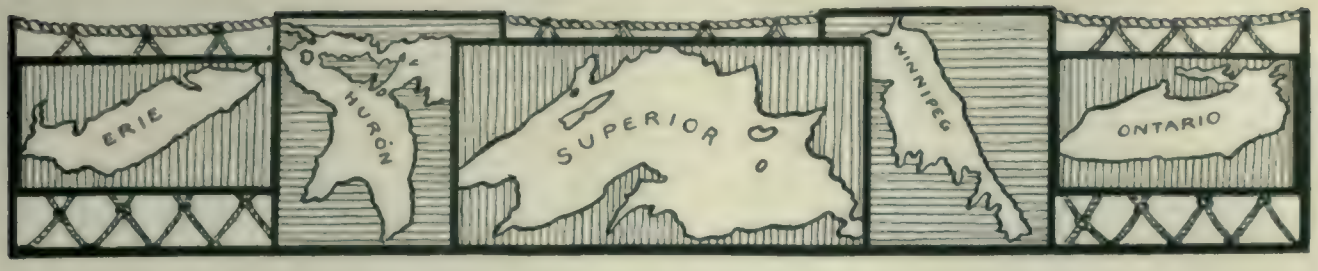


THE LAKE FISHERIES

FORTY CANNERIES POOL OUTPUT THROUGH SELLING CORPORATION.

Forty of the "independent" canning companies in Ontario have entered into an agreement to market their entire output through a new sales corporation which has secured a provincial charter under the name of Canned Goods, Limited, capitalized at $100,000. The company will have a board of twelve directors, representative of the partner factories, and its general sales agents for Canada will be W. H. Millman and Sons, 27 Front Street east, Toronto.

Mr. Millman said last night that the new company will be making a public announcement in the course of a few days. At the same time, it will announce its schedule of prices for canned goods for the season, which, he promised, will produce a favorable impression from the standpoint of cheapness. The company proposes to keep its prices down to a small margin of profit, securing greater economy by the pooling of the partners' output, thus regulating the supply more accurately to the demand and eliminating losses through the fierce competition which lately has been prevalent in the industry. It is said that each partner factory is to retain full control of its own administration, the pooling agreement extending only to the sale of products.

The completion of this organization will reduce the number of "independent" canning factories in the province to about half a dozen, chiefly in Western Ontario, all the others being already organized along somewhat similar lines in the Dominion Canners, Limited, and kindred corporations.

FISHERIES TREATY STILL UNDER DISCUSSION.

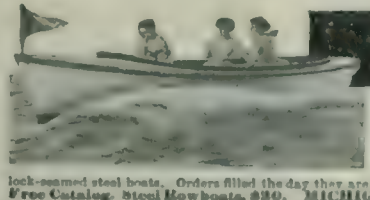
Washington, April 2.—Representatives in Congress from the Canadian border States are preparing for a lively debate on the Flood Bill to carry into effect the treaty with Great Britain concerning the fisheries in waters contagious to the United States and Canada, signed April 1, 1908. The Bill, which was vigorously contested in committee, is now on the calendar ready to be called up at any time in the House.

The Foreign Affairs Committee, which reported the measure, amended it to meet the objection of American fishermen on Lake Erie, who said the bill would bar the use of trap nets, the only kind the fishermen of the American side could use, they explained, while the Canadians use only the Pound nets. The Lake fishermen asserted that they would be put out of business if the Bill passed without the amendment, which suspended the regulation prohibiting trap nets in treaty waters, the suspension to continue until the International Fisheries Commission revises the regulations and Congress approves the revision.

NEW DEPARTMENT OF GAME AND FISHERY FOR ONTARIO.

Reorganization of the game and fish branch of the Ontario Public Works Department is to be provided for in legislation this session. On April 2nd, Hon. Dr. Reaume, the Works Minister, introduced a bill providing for the creation of a separate sub-department covering the work of the game and fisheries branch. The bill will provide for the appointment of a Deputy Minister of Game and Fisheries, and will make provision, it is understood, for a changing of the present system to meet criticisms that have been launched against it from time to time.

Hon. Dr. Reaume stated last night that while additional help would be secured for the new department, it was hardly likely a Deputy Minister would be placed in charge earlier than the Fall. Albert Sheriff, at present private secretary to the Minster, has been taking considerable interest in the game and fisheries end of the service, and it is considered likely that he will have his duties added to as a result of the changed conditions.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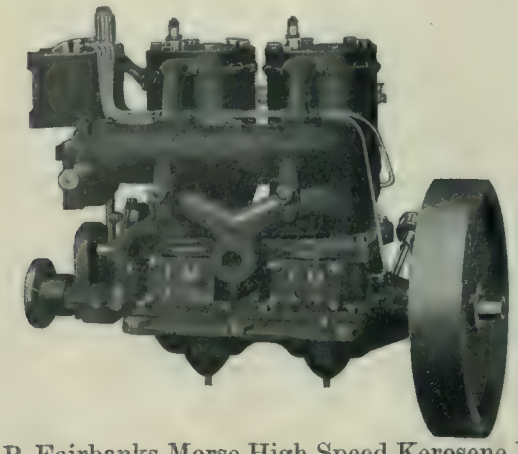
TWO RECENT MARINE ENGINE DEVELOPMENTS

By C. H. SEAVER.

Two notable examples of the latest development in internal combustion engines, in which high efficiency on low grade fuels is obtained were exhibited by Fairbanks, Morse & Co., at the recent New York Motor Boat Show. One of these, known as their Type "CO" heavy duty Marine Engine, is adapted for operation on fuel and crude oils, while the other, their Type "AB," is a high-speed engine running equally well on kerosene or gasoline. Both engines, which are briefly described here, aroused a great deal of interest.



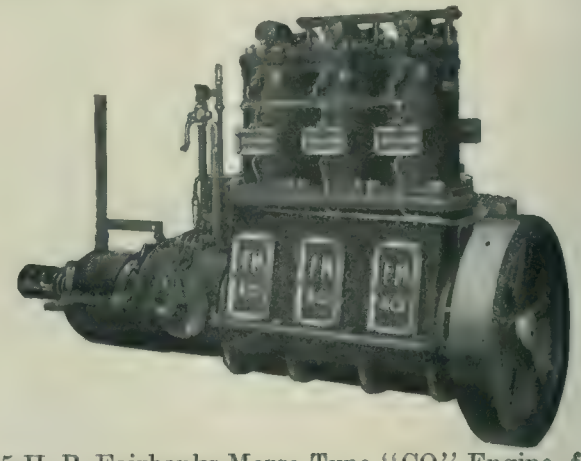
14 H. P. Fairbanks-Morse High-Speed Kerosene Engine.

The need for an economical and efficient marine engine for commercial use running on low grade oils has been fully met by their Type "CO" hot-bulb Marine Engine. It operates perfectly and with splendid economy on a wide range of fuels. Instead of being limited to kerosene, or even two or three particular varieties of the lower grade oils, the engine user will be able to employ satisfactorily practically every grade of oil testing from 20-deg. B to 50-deg. B. With an engine of this type the operator can feel certain, even in putting into a strange port, that he will be able to obtain suitable fuel. Should no low-grade oil of any variety be available the engine will run perfectly on kerosene.

As in other engines of the semi-diesel type the combustible is not compressed, but is forcily injected into the combustion chamber at a point near the end of the up stroke, and is ignited by a hot bulb. No carburetor, and no mechanical or electrical igniter is employed.

The suitability of this type of engine for the heavy service of fishing craft and the hard work of commercial boats has been thoroughly demonstrated by long usage. The engines have repeatedly been given the hardest tests, run long hours and under unfavorable conditions, and have come through these trials perfectly.

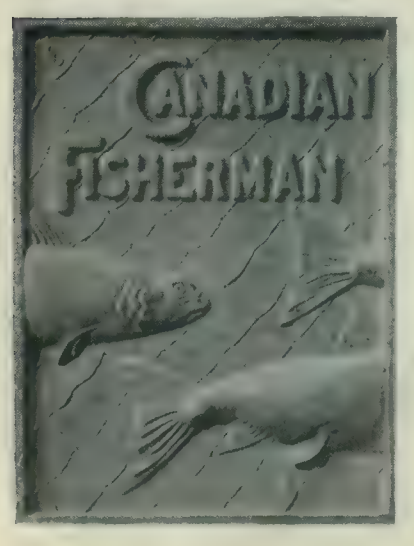
The Type "AB" high-speed engine, while not adapted to fuel oils, has the merit of operating equally well



45 H. P. Fairbanks-Morse Type "CO" Engine, for Heavy Oils.

on kerosene or gasoline, the change over from one fuel to the other being made without any engine adjustment whatever. An entirely new principle gives great economy of fuel and flexibility of operation.

The fuel, either kerosene or gasoline, is injected into the by-pass (not the cylinder) under conditions which have not been possible with other devices. No fuel enters the crank-case and there are, consequently, no back fires. The mixture for each cylinder is adjusted independently which is the only method of obtaining perfect result with the varying grades of fuel now in the market.



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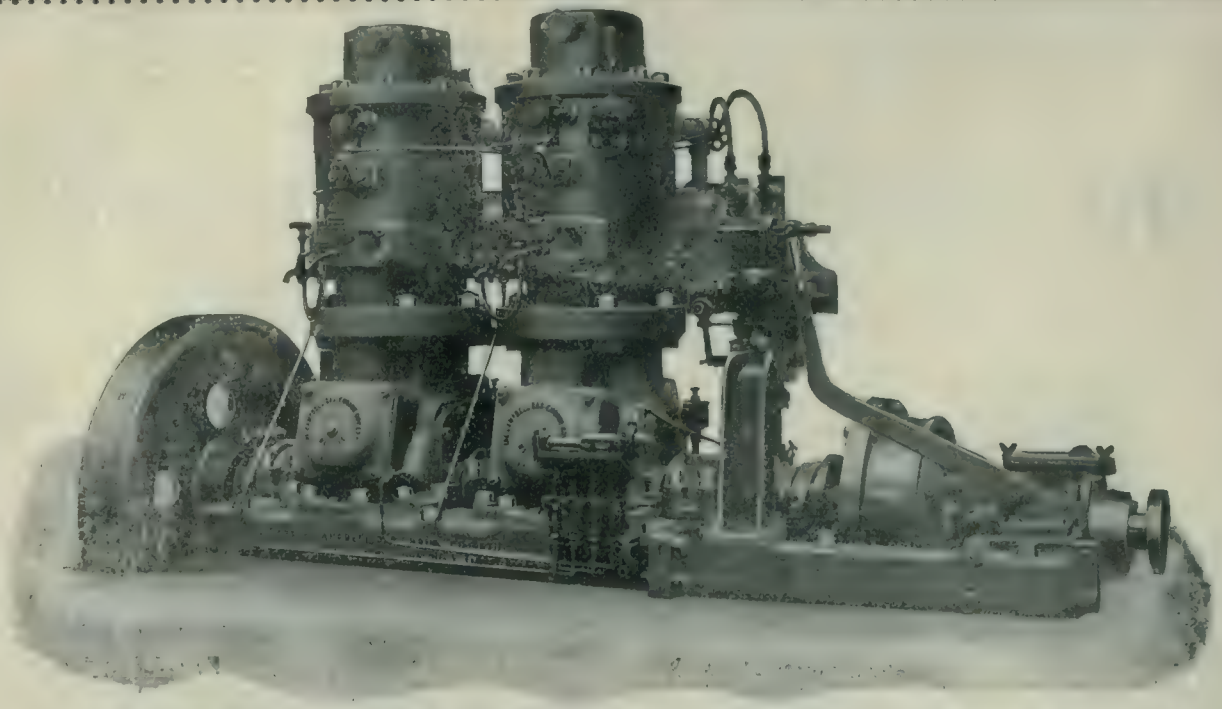

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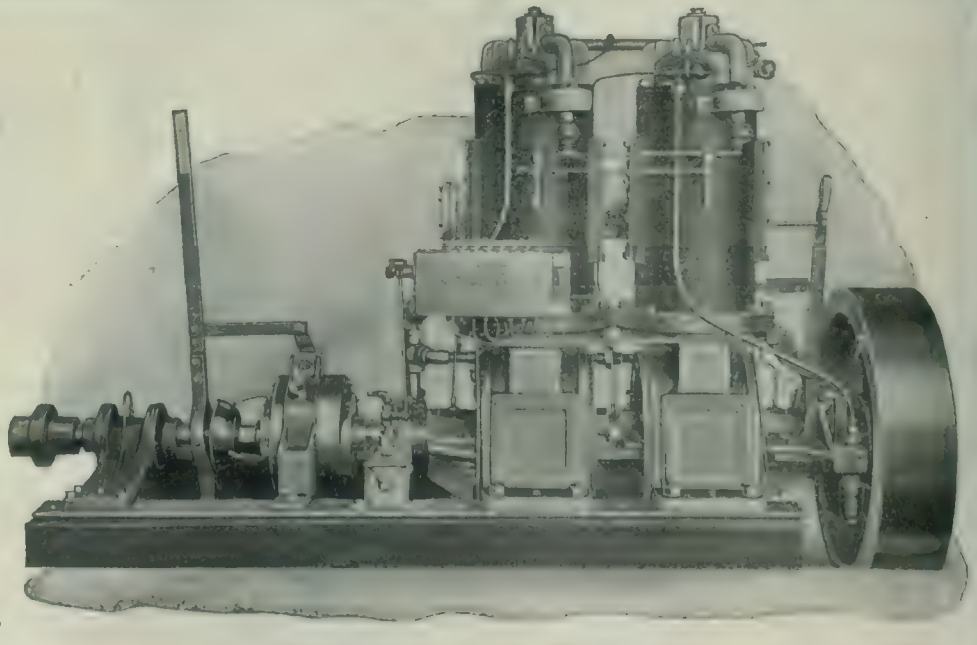

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CANADIAN FISHERMAN

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

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Vol. I. MONTREAL, MAY, 1914 No. 5

SAVE THE LOBSTER.

The lobster has been the subject of more discussion, legislation, and investigating commissions than any other crustacean inhabiting salt water. What with laws which are one-sided and which if they are not immediately amended will cause a total extinction of the shellfish in question, the lobster has been having a hard time of it. Commissions in Canada and the United States have made their investigations and recommendations, but, so far, none of their policies have been satisfactorily adopted.

Without going into details, which every fisherman and lobster cannery proprietor knows, there is no doubt whatever that if the present regulations continue the lobster will be cleaned out of our coastal waters within a few years. In some localities it has already shown an alarming decrease. Bottoms once famous for the abundance of the valuable shellfish, have, of late, hardly paid for the expense and labour of setting traps.

In a recent editorial, the Digby, N.S., Courier, makes the following significant comment.

> A Courier representative was shown on Wednesday three boiled lobsters which had been found in a canning factory where they were sold by fishermen for 4c each. The largest one measured 2 5-8 inches, of back. The same gentleman had a smaller one alive in a pail of sea water. The above tells the tale of how our lobsters are being caught up and destroyed before they reach a size for marketing. A regular sized lobster will bring 40c, but too many of our fishermen save the small ones, which sell at 4c. If they would throw them back into the sea uninjured they would soon become valuable, but as it is at present the fishermen are rapidly destroying a valuable industry. On Tuesday a fisherman at Westport hauled 25 traps which had been set several days and secured in all, five of these little lobsters less than three inches in length, and not long enough for the market. Unless the catch of small ones is prohibited it is but a short time when the lobster fishery of Digby county will be ruined. No matter what laws the government makes two thirds of the fishermen are dissatisfied, but something has got to be done to protect the lobster fishery, and it must be done as soon as possible.

Reports from various localities upon the Atlantic coast indicate that the Spring lobster fishery is the poorest for many years. Bad weather with the consequent havoc to the gear may be responsible for some of the decrease in returns, but the prime cause is the scarcity of the lobsters. On many parts of the coast, fishermen having from twenty to sixty traps set, have become so discouraged at the miserable hauls that they have taken their gear up and gone out of the business.

Every natural resource should be protected. Conservation demands that the immature and undersized of everything living and growing be jealously guarded for the future, and that nothing be harvested until it has been allowed to reproduce itself once at least. In Forestry, upon the Dominion Timber Limits, the

yonug trees are protected from the lumberman's axe until they have attained a certain size, and a system of replacing cut timber by the planting of young trees is enforced by law. In this we have learned a lesson from the United States where the forests were ruthlessly cut down and no protection or reforestation enforced until too late.

As in Forestry, so should it be in the lobster fishery. The young and undersized lobster must be protected if we wish to keep the lobster within our waters, and in addition to the protection it is necessary that an up-to-date system of hatcheries be organized to replace what has been taken.

It is an exceedingly difficult matter to define a proposition which is likely to satisfy both the fisherman and the canner. Whatever law is made, one or the other will suffer. Remedies, without number, have been suggested. In this connection, a recent issue of the Shelburne, N.S. Gazette said:—

"Men hold various opinions as to the remedy which will meet this state of affairs, and give some prospect of the lobster fishery along this coast being placed where it was a few years ago. A. L. Crowell, of Smithville, who is well qualified from many years' experience as a fisherman and a dealer to express an opinion, was in or office a few days ago, and, in the course of conversation, stated that he believed that a majority of the most far-seeing men engaged in the lobster business in this province would be in favor of a close season for five years, to be followed by permisssion to catch only lobsters over nine inches in length. In support of this contention Mr. Crowell cited an instance in point. Returns for one month from one district on this shore indicated, in round numbers, 30,000 lobsters caught and marketed. Of these 30 were large, 96 medium and all the rest small."

Mr. Crowell's suggestion is a good one and probably expresses the sentiments of all right thinking fishermen and dealers in the business, but the big drawback is that the canners will register a kick at having their capital tied up for a period of five years without returns. The long close season would come pretty hard upon some of the fishermen owning large quantities of gear and depending for the greater part of their livelihoood upon the lobster fishery, but if the lobster is to be preserved sacrifices will have to be made.

If the five years close season were not adopted, the only means left to protect the industry consists in a regulation forbidding the capture of lobsters under nine inches for either canning purposes or for sale as live lobsters. When it attains that size it has had a chance to spawn once. All seed, or berried lobsters to be returned to the water when taken or carried to the nearest hatchery, where a reasonable bounty should be paid the fishermen upon delivery. A system of lobster hatcheries to be established around the coast—preferably in localities where the lobster is becoming scarce. Above all, the help and assistance of the men engaged in the industry in seeing that the law is rigidly kept.

The size limit will strike hard at the canning industry. It did in the State of Maine when the 10½ inch size limit was enforced. But the canners will not be so badly off as were the Canadian Pacific Ocean sealers when the close season of fifteen years was placed upon their business through the Pelagic Sealing Treaty of 1911. To prevent the extinction of the fur seal such a drastic law was necessary and a vast fleet of schooners went out of business.

The vexed question of the lobster fishery culminated latterly in the appointment of the Shellfish Commission of 1912-13. Their report has been issued, but the recommendations in it are not altogether satisfactory to the fishermen. Regulation, Number 3, limiting the exportation of live lobsters to a 4¾ inch carapace size, being in the eyes of the fishermen manifestly unfair and curtailing their market. Some of the close seasons for certain localities do not meet with favor.

It is a difficult matter to settle satisfactorily to all concerned, but whatever regulations are enforced for the conservation of the lobster fishery, the price must necessarily go up to repay the producer's loss in decreased production.

Lobsters are a luxury. They are consumed by persons well able to afford a high price and if they were sold as high as five dollars for a pound can or live lobster, there would still be a market for them. The CANADIAN FISHERMAN will encourage and advocate anything for the progress and development of the fishing industry in Canada, but we do not believe in development without conservation.

EDUCATION FOR FISHERMEN.

A movement is on foot in the United States for the establishment and upkeep of a College to be devoted to the Fisheries. This institution is not intended to be a school of icthyology for the use of persons interested in fish from a scientific point of view, but it is proposed to maintain it for the education of fishermen in their particular line of business.

In Canada, the farmer has been having it all his own way. In the popular imagination, the farmer is the backbone of the country. Various Governments have pandered to him in the way of valuable concessions. Expensive Agricultural Colleges and Experimental Farms for the better education of the farmer have been located all over the Dominion. To these colleges and experimental farms the young agriculturalist can study his particular business and learn to work his land to the best advantage. In addition, trained lecturers tour the farming districts and deliver valuable lessons, often illustrated with lantern slides, to the farmers: special trains with cars fitted up with agricultural exhibits tour the country from coast to coast: handboooks on particluar branches of agri-

culture are distributed free, and local exhibitions are held yearly under Government auspices. Nowadays, if a farmer don't know his business, it is not the fault of the Government.

We do not, for a moment, criticise the undoubted good work which the Government has, and is doing by their educational campaign for better and more intelligent methods in stock raising, poultry farming, dairying, grain growing, etc., but we are of the opinion that another important industrial ranch—the farmers of the sea—are being neglected in educational facilities. The Fisheries Department are doing good work as far as their limited organization and staff will permit, but their investigations and the valuable information which they collect do not come to the fishermen. The officers comprising the Fisheries Department are earnest in their endeavour to distribute information of value to the fishing industry, but with the limited means at their disposal they are unable to accomplish much in the way of educational work.

The majority of our Canadian fishermen can read and write. Pamphlets describing better methods of catching and curing fish should be distributed among them through the post offices or fishery overseers throughout the Dominion. But in writing these booklets, care must be taken that they are couched in the language which fishermen will understand. A document written up in flowery literary style and bristling with scientific terms is absolutely wasted effort and the average fisherman would need to have a dictionary "under his lee" to understand it. Illustrations, and plenty of them, should be included in every educational booklet. To the man of ordinary education they explain things better than a yard of printed type. For a beginning, booklets of this nature, explaining the best methods of catching fish; the salting, curing, drying, and packing for market, and subjects of practical interest, will help the industry a great deal, and be worth the money expended.

The work should not stop there. The Fisheries College idea should be developed, and establishments located upon the Pacific, Great Lakes, and Atlantic. Fishermen need instruction in many things and practical instruction will do more than an ocean of printer's ink. The average fisherman has learned his business through watching others and by figuring things out in his own mind. He knows that a certain kind of hook or net is suitable for a certain kind of fish capture. He knows something of the bait which fish will bite on at different seasons. He knows where certain species of fish are to be caught, but why they should be there and the conditions governing the migrations of fish are to him a closed book. Very few fishermen can, with any certainty, follow the fish scientifically. He makes a set or a haul in one spot with success. Next day, he may get nothing. The fish have gone, and he has to cruise looking for them. A scientist versed in ichthyology could explain the reasons, but the fisherman knows nothing about it.

If a fisherman knew something of the bottoms which fish feed upon at certain seasons: if he knew how the temperature of the water affects them; if he knew more of the baits most likely to appeal to them at times: if he were better educated in the habits of the fish, he would undoubtedly make a better fisherman. The writer knows numerous instances where scientific knowledge would have been invaluable to a fisherman. We have fished for halibut with certain baits and got nothing. Using another variety, we got a good haul. We made sets on halibuting, haddocking, and shacking trips in depths of water and on bottoms where the bait was wasted, and on spots, if we had known better, we would never have fished. We set for halibut in shoal water, and got nothing, while another vessel, not far away, but fishing in deeper water, got a good haul. We put gear over in various localities, where if we had known more about the feeding grounds of fish, we never would have set. A hundred instances might be mentioned of a similar nature where an education in fishery science would have saved time and money.

Just as the Agricultural College educates the farmer to use up-to-date and scientific methods in farming for the development of his business, so the Fisheries College should do its part in educating the fisherman. The College would need to be located in some handy port accessible to the most prolific fishing grounds. It should comprise well constructed wharves and buildings where some of the fares of local fishermen could be purchased for the purpose of demonstrating the proper methods of salting, drying, pickling, smoking and preparing fish for market. Practical men in charge of the various departments and with the ability to lecture and explain, should comprise the teaching staff.

The fisherman wishing to learn more about his business could then be able to take up a course of instruction right at the College for as lengthy a period as he can afford. There should be no fees for instruction—all the expense the student should be put to would be for board.

Results of the experiments at the College could be distributed in pamphlet form as already suggested, and with lecture tours throughout the fishing communities, there is absolutely no doubt that the standard of the fishing industry in Canada could be elevated to the very highest. The farmer of the land has been provided with means for a technical education, why not the farmer of the sea?

MOVING PICTURES AND THE FISH BUSINESS.

Apart from its value as an amusement factor, the motion picture is fast becoming a most important means of education in various industries and trades. In connection with the fisheries, it is interesting to note that the National Canners' Association intend having a series of films prepared illustrating the methods of preparing canned fish. These will portray

such features as salmon canning—showing all the aspects of the business from the catching of the salmon to the final packing operations. When run off in the picture theatres throughout the country, films of this nature cannot help but stimulate an increased trade in the commodity.

Much of the ill-founded objection that many people have against eating fish will be disproved by this means. They will see fish carefully handled and packed by skilled workmen in clean factories and this important feature—that of careful handling and cleanliness—will do more to increase the sale of canned fish than any other argument.

EAT MORE FISH AND THUS REDUCE COST OF LIVING.

"Eat fish and reduce the cost of living," is a suggestion of Commissioner McDougald, Chairman of the Dominion Commission, which was in St. John, N.B., inquiring into prices and conditions.

Speaking of the results of the investigation so far, he said that the evidence seemed to indicate that while the price of beef was advancing steadily with no prospect of stopping, the cost of fish food had not increased in proportion.

It appears that the use of more fish, in place of meat would help to reduce household bills, and would be beneficial from a health standpoint."

The above opinion expressed by a member of an important Commission offers a great advertising slogan to the Canadian firms engaged in supplying the public with fish of all kinds. No better time than the present could be chosen for opening up a publicity campaign on the eating of fish. It pays to advertise, but better results can be obtained by making use of an expert opinion especially when delivered at a time when most people are casting about for means to reduce the excessive cost of foodstuffs.

FISHERIES STATISTICS, MARCH, 1914.

The total value of salt water fish, in first hands, landed in Canada during the month of March, 1914, amounted to $288,669, which is $59,863 greater than the total for March last year.

The catch of cod for the month is about equal to that for the corresponding month last year, while the catch of haddock is 2,169 cwts. greater than that for March, 1913.

The catches of herring and halibut, which were chiefly landed in British Columbia, were much greater than in the preceding March.

The total pack of canned lobsters on the Atlantic coast from November 15th to the end of March, was 10,532 cases; while the total shipment in shell was 24,305 cwts. During the corresponding period in the preceding year the pack was 7,008 cases, and the shipment in shell, 33,018 cwts.

For the twelve months ended March 31st 1914, the value of sea fish, in first hands, landed on both coasts is greater than that for the corresponding period in the preceding year by $2,737,645. Almost all the chief kinds of fish contributed to the increase.

TRADE INQUIRIES

The names of the firms making these inquiries, with their addresses, can be obtained only by those especially interested in the respective commodities upon application to: "The Inquiries Branch, the Department of Trade and Commerce, Ottawa," or the Secretary of the Canadian Manufacturers' Association, Toronto, or the Secretary of the Board of Trade, at London, Toronto, Hamilton, Kingston, Brandon, Halifax, Montreal, St. John, Sherbrooke, Vancouver, Victoria, Winnipeg, Calgary, Saskatoon, and Chambre de Commerce du Montreal.

Please quote the Reference Number when requesting Addresses.

326. **Crushed oyster shells.**—A Lancashire corn merchant is in a position to handle about 300 tons yearly of crushed oyster shells for poultry feeding, and would like to get in touch with Canadian exporters.

327. **Canned lobster.**—A firm in Amsterdam is anxious to obtain quotations on canned lobster, from Canadian exporters.

331. **Canned salmon.**—A Grimsby firm inquires for quotations from canned salmon packers.

332. **Canned salmon.**—A West Bromwich firm inquires for packers of salmon.

336. **Canned salmon.**—A Wolverhampton firm inquires for exporters of canned salmon.

340. **Canned salmon.**—A Nottingham firm inquires for exporters of canned salmon.

341. **Canned salmon.**—A Newcastle-on-Tyne firm is prepared to cosider quotations.

343. **Canned salmon.**—A Great Bridge firm is open to purchase canned salmon.

344. **Canned salmon.**—A Birmingham importer is open to receive quotations.

384. **Salmon.**—A Birmingham importer is anxious to hear from packers of British Columbia salmon.

349. **Salmon.**—A London firm can take large quantities of British Columbia salmon of first rate quality.

350. **Salmon.**—A Bristol firm would like to get in touch with British Columbia salmon packers.

351. **Halibut.**—A Glasgow fish salesman inquires for Canadian importers.

352. **Halibut.**—A wholesale fish merchant in Glasgow asks to be put in touch with Canadian supplies.

353. **Halibut and salmon**—Some Glasgow fish merchants desire to hear from Canadian exporters.

354. **Halibut and salmon.**—A Glasgow merchant is open to sell on commission.

355. **Halibut and salmon.**—A Glasgow fish salesman is open to receive consignments.

356. **Halibut and salmon.**—A Glasgow house desires to be put in touch with Canadian shippers.

357. **Halibut.**—A Glasgow firm is open to consider Canadian supplies.

358. **Halibut and salmon.**—A Glasgow salesman is desirous of obtaining a sole agency for Glasgow .

359. **Canned salmon.**—A Glasgow firm is anxious to receive supplies and quotations. Best quality only.

361. **Canned salmon.**—A Glasgow house will be pleased to receive samples and quotations.

Captain Sol Jacobs is still afloat and is going out seining on the "Pythian." While coming up from the south'ard he sighted many schools of mackerel and he thinks a good year is likely for the seiners.

THE NEW BOSTON FISH DOCK.

By FREDERICK ROCHE.

After 30 years at T wharf, the fish dealers of Boston have moved this Spring to new quarters in South Boston, where they occupy a $3,000,000 plant, including the biggest and finest dock in the world devoted exclusively to the fisheries, and one of the biggest and most completely equipped cold storage warehouses in the country.

The new Boston Fish Pier at South Boston is unique, a radical departure from anything ever attempted before in the fisheries. More sanitary conditions for handling the fish for which the City of Boston is the chief distributing point for the Eastern part of the United States, have been provided, and absolute cleanliness has been the watchword of the officers and directors of the Boston Fish Market Corporation, under whose personal charge the great new plant has been constructed and put into operation.

The new dock, built of concrete, is 1,200 feet long and 400 feet wide, fireproof throughout It presents a strong contrast to T wharf, lacking perhaps the picturesque congestion of the latter, but providing adequate facilities for the handling of the 129,000,000 lbs. of fish which are distributed yearly through the port of Boston.

When the wholesale fresh fish business was started at Commercial wharf in Boston, over 30 years ago, there were less than half a dozen wholesale dealers in the business. The Fishing fleet was extremely small, consisting of a number of catboats used by the fishermen of the smaller New England ports, and of the Gloucester fleet of schooners, the latter only making trips to the offshore grounds and bringing mostly salt fish to port. When 30 years ago the wholesalers took a ten-year lease on T wharf, they had serious apprehensions that they were walking from the frying pan into the fire, as no one at that time even dreamed that the wholesale fresh fish business of New England would increase as phenomenally as it has.

Events have proved, however, that Boston was destined to become the greatest fresh fish port of the United States. The opening of the new $3,000,000 plant at South Boston is to be regarded not as the final word in the history of the progress of the New England fisheries, but as the first step towards placing those fisheries on a systematic and scientific basis.

In 1913, according to the statistics of the United States Government, 3,582 vessels brought $2,988,552 worth of fish into Boston. During the same period of time, the figures show, a larger fleet—but of very much smaller vessels—brought but half as much fish into Gloucester, formerly the great fish port of the East, although most of the fish cured there is eventually handled through the Boston market.

In marked contrast to T wharf, the dock basins of which have been inadequate for the past 15 years, and where on a busy day it was impossible to unload the fish from the vessels the new pier at South Boston will have excellent facilities for handling a large number of vessels at one time. There is ample space for 80 large schooners to discharge their cargoes simultaneously.

The preparations made to accommodate so many vessels were in no small measure due to the passage of the new Tariff bill, as the dealers believe that under that bill a large number of Canadian vessels will take advantage of the fact that they can land their catches at Boston free of duty.

The new Boston Fish Pier, which replaces the famous T Wharf.

The new dock makes it necessary for the Boston dealers to find a means of greatly increasing their supply of fresh ground fish, and they are naturally looking towards the fishermen of the Maritime Provinces to do this. Already, during the last part of their tenancy at T wharf, one Canadian owned and manned schooner, the Morning Star, Captain Harry Ross, of Digby, N.S., has been landing large catches of fresh ground fish at T wharf. They expect that the example of this vessel, which has made excellent money, will be followed by numerous others within a short time.

It is not only in the facilities for docking vessels that the new pier presents an advance over T wharf. It is impossible at T wharf to handle the fish in a scientific or sanitary manner. Waste matter, which had accumulated in under the dock for years could not be dredged out, and the odor arising from it at low tide was enough to discourage anyone from eating fish. The pier and the stores built of wood were soaked with a mixture of fish gurry and water. The dock always presented a picturesque appearance, due to the fact

that it was overcrowded and that its employees were roughly garbed.

The new pier is provided with a high pressure salt water system by means of which every inch of the dock and the tiled lined stores can be thoroughly washed out daily. The employees who handle the fish will all be neatly uniformed.

A broad avenue, running the entire length of the pier between the two rows of stores, will provide adequate space for teaming; while two 40 foot wide passages outside the buildings will provide ample space for handling the fish in a proper manner. The old wooden handcarts, used for transporting the fish from the vessels to the stores at T wharf will be replaced in the near future by some sanitary conveyance which can be readily cleaned out.

At the head of this pier stand the power house and the cold storage and ice making plant ,one of the finest in the world. In this building all the ice for the vessels and for the stores will be made, the heat and light for the entire plant will be produced, and the surplus supply of fish will be put into cold storage. Freight cars for all parts of the country will be backed right down to this building each morning. At the water end of the dock stands the Administration building, housing the New England Fish Exchange, through which all the fish are bought and sold, as well as the offices of the directors of the Boston Fish Market Corporation, which has charge of the new pier.

The project of erecting this big new pier and of making Boston the leading fish mart of the entire world was conceived many years ago. It is not until this year however, that the Boston fish dealers have been able to realize the plan Although Boston is not yet as great a fish mart as Grimsby, England, the fish dealers of Boston are confident that the opening of their new pier is a step towards enabling them to surpass Grimsby.

The history of Boston, as of all New England, is inseparably connected with the fisheries. The very name of Cape Cod bears witness to the fact that the importance of the New England fisheries was recognized by the discoveries of that coast line. The "Sacred Cod Fish" holds a position in the estimation of the people of Boston, second only to that of the proverbial bean, and when the Massachusetts House of Representatives is in session on matters of state its members have always before them an immense codfish,—a masterpiece of the taxidermists' art.

In the early days the fishermen, using small boats of the catboat type, used to fish off in Boston Bay, bringing their catches to the wharves of Charlestown, where they disposed of them at retail. Some of the fishermen were accustomed to fish at night, and days peddle their fish from house to house about the countryside.

The fishermen of early Boston found little call for other varieties than cod, haddock and mackerel. It is said that when in 1828 the first full trip of halibut, today greatly in demand in New England, was brought to Boston, none of the fish dealers would even bid upon it.

The fishermen in Summer sold their fares only in Boston, because of the fact that without ice, which had not then been thought of in connection with the fisheries, they could not preserve the fish to ship it inland. In Winter, however, many of the fishermen loaded their catch upon teams or upon handcarts, and took their catches to the outlying towns.

In 1835 the first wholesale fish store was established on Log wharf in Boston by the firm of Holbrook, Smith & Company. For a few years previous to that the small boat fishermen had been selling their catches at retail or in some few instances at wholesale to peddlers just below Fanueil Hall market In 1838 Holbrook, Smith & Company established a new place of business on the North side of Commercial wharf, in a wooden shanty, as the fine stone building there built especially for the East Indian merchant trade was considered far too fine a place for a mere fish store.

Seeing that this firm was making money in the wholesale fish business, others entered the trade, occupying the humble wooden shanties on the North side of the pier. The introduction of the use of ice in the the fish business gave this trade a mighty impulse. The dealers at Commercial wharf used to sleep in their stores at night to be on hand should a fishing vessel arrive. Sometimes weeks went by without a boat arriving. When one did get in, no matter at what hour of the day or night, the dealers rushed for the caplog and shouted bids at the skipper. In those days a dollar a hundredweight was considered a good price for almost any kind of fish,—a striking contrast to conditions last year, when as high as 50 cents a pound was paid at T wharf for halibut and codfish sold at wholesale at over 17 cents a pound.

In 1884 the wholesale fresh fish dealers of Boston, who had then increased in number, came together and formed an association to take a ten year lease upon the entire property of T wharf. Two score of stores were built according to plans drawn up by the dealers, and in the Fall the fish business was housed at T wharf, where it has remained for 30 years.

Perhaps the most radical change which has taken place in the wholesale fresh fish business during the entire residence of the fish dealers at T wharf was the formation, in September, 1908, of the New England Fish Exchange, incorporated by the following dealers: John R. Neal, Benjamin F. Rich, Christopher J. Whitman, William J. O'Brien, Albert E. Watts, Maurice P. Shaw, Herbert F. Phillips, John Burns, Jr., Francis J. O'Hara, Jr., Alvin G. Baker and Albert F. Henry.

The purpose of the Exchange was primarily to put the fish business on a sound and systematic basis. Previous to its foundation the dealings between the skippers and the wholesale dealers were subject to no regulations. The Exchange guaranteed to the dealers that the skippers would deliver full weight, and to the captains that the dealers would pay in full for what they got. In other words, the Exchange was founded as a clearing house for the wholesale fish business.

In 1909 Manager William K. Beardsley, of the New England Fish Exchange, succeeded in finishing the organizations of the Boston Wholesale Fish Dealers' Credit Association, an organization, the function of which is to regulate the dealings of the retailers and the wholesalers in the same manner as the Exchange regulates those of the skippers and the wholesaler.

These two organizations guaranteeing sound business all along the line, revolutionized the fish businesss.

From the time that the business began to grow the dealers began to pay more attention to the lot of the fisherman, and many changes have been made in the types of vessel used in the fish business. The old, squatty, slow-sailing, flat-bottomed schooner is a thing of the past in the New England fisheries. Thomas F. McManus, the Boston yacht designer, who planned the swifter sailing vessels in use at the present time, building them more on the model of private yachts than of the old type of schooner, in 1908 turned out the Helen B. Thomas, the forerunner of the present good sized fleet of knockabout schooners. Many of the Boston fishing boats are equipped with gasoline engines.

In 1905 the Bay State Fishing Company put into operation the first steam trawler used in New England. Since then a fleet of 10 steam trawlers have been put into operation. The use of this type of vessel brought forth a protest from the schooner fishermen, and the matter has been under investigation by experts of the United States Government, who have been looking into the claim made by some that vessels of this type destroy more fish than they bring to port. At first the operations of the steam trawlers were not entirely successful from a financial point of view, but during the past few years the fleet have been making very good catches, and it is said that the stockholders of the company are receiving good dividends on their investment.

The government of the Commonwealth of Massachusetts and the United States Government are interested in the project of erecting in the near future a fishermen's institute for the education of the men of the fishing fleet. The wholesale dealers, too, are doing their utmost toward educating the fishermen in handling groundfish in a more sanitary manner. The authorities in charge of the new pier, who have done everything in their power to see that the fish is handled properly up to the time that it reaches the retail store, hope to see a radical change in the methods of the latter.

They also plan to educate the ultimate consumer upon the subject of fish, claiming that the average housewife neither knows good fish or how to cook it properly.

In order to make the new pier a success financially the Boston fish dealers must greatly increase the consumption of fish; and at the same time they must increase their available supply While they feel confident that their present plans for the education of the fish eating public will accomplish the former purpose, they look to the fishermen of Canada to aid them in the attainment of the latter.

Technical Training for Fishermen

(By Colin McKay).

Usually fishermen are noted for the keenness of the interest they display in matters concerning the education of their children, and their readiness to spend money to provide school facilities. Lunenburg, the principal deep sea fishing port of Canada, has long boasted the possession of a school plant superior to that of any other town of the same size in Nova Scotia. Clark's Harbor, probably the most important shore fishing town in Nova Scotia, also claims that its school facilities, in proportion to its population, are unrivalled in the Maritime Provinces. Grand Manan, where the people are almost wholly dependent upon the fisheries, is, according to William McLean, a veteran school inspector, more generous in its attitude to its public schools than any other community in New Brunswick.

Probably many fishermen want to give their children an education which will enable them to enter other occupations, but with the expansion of the fishing industry new opportunities will present themselves, and there will be increasing need for young men possessed not only of a general education, but technical training. When the Royal Commission on technical education visited the fishing ports it found considerable interest in the question of technical nstruction for those engaged in the various branches of the fishing industry, and there is little doubt that if proper facilities for technical instruction were provided they would be taken advantage of by the fisher folk and their children.

"Fishermen cure their fish as their forefathers did. Technical education is desirable. Biological schools are doing something, but not enough. Training is needed for fishing. Shad fishing, which was formerly important, is now declining. Oyster beds need supervision. There is great waste in the herring fishery; the Scotch system of control would check this. Much wanton destruction is caused by sportsmen and others and laws to prevent waste should be enacted. If young people were trained it would be a good means of insuring the stability of the industry and the development of natural resources. There is a lack of trained men, especially in curing and treating fish.

"Instruction should be given in the variety and value of good fishes, particularly the smelt, the quahaug, clam and herring industry. Other nations have protected their oyster beds and made a great harvest of wealth; it would be valuable to have instructors show what has been done elsewhere."

In summarizing the evidence taken at Lunenburg, the Commissioners say:

"Fishing people are intelligent, but conservative and slow to take up new ideas. Fishermen's libraries should be established at different points to bring to their notice in a systematic way the results of experiments and the advantage of carrying them out. Reports of the Fishery Commission should be summarized and made available to fishermen.

"A campaign of education is needed to ensure better transportation, on which the fish industry largely depends.

"Technical training would be good for the fishing industry, and leading men in the locality would assist in maintaining a demand for it. Men who handle boats and nets need technical instruction. The net fishing industry of Scotland was developed through technical education. Curing requires more training than catching, though labor is unskilled except the foreman.

"Drying is mechanical and artificial and does not require technical education, but packing does and also pickling.

"Instruction in curing on the Norwegian plan would be good; also sending men around to different ports to instruct the fishermen in winter, when they are not busy.

"Any system of technical education for Lunenburg district must include a navigation school.

"Several witnesses state that buyers need to be reached before the fishermen; people should be educated in the food value of fish as compared with other things, and Domestic Science schools can help in this by showing how to cook fish in the best way."

Even if the government only sent lecturers around to address meetings of persons employed in the fishing industry and encouraged annual conventions of fishermen and allied workers, as it does in the case of farmers, much good would result.

A Brief Consideration of the Legal Position of the Canadian Fisheries

By L. H. MARTELL, B.A., B.C.L., Barrister-at-Law

In the beginning of the world, we are told by Holy Writ, the all-bountiful Creator among other things gave to man "dominion over the fish of the sea. The fish of the sea would therefore seem to have been the general property of all mankind, from the immediate gift of the Creator. Hence it is reasonable to suppose that while the earth continued bare of many inhabitants everyone took to his own use from the ownership in common such fish as his immediate necessities required.

This general notion of property in the fish of the sea was then sufficient to answer all the purposes of human life, and might perhaps still have answered them had it been possible for mankind to have remained in a state of primeval simplicity. But when mankind increased in number, craft and ambition, and the earth became rent into different states and kingdoms, and inhabited by different races, the general notion of property rights in the fisheries, as well as the jurisdiction over them, became changed so as to be in consonance with this evolution and progress.

The Common Right of All Nations

Before entering on a consideration of the property rights in the fisheries of Canada, and the jurisdiction over said fisheries, we should briefly consider what are the general rights of all nations in connection with the fisheries in extra-territorial waters, and the application of the English law to the fisheries of Canada. To-day, each and every nation, or rather I should say country, has absolute rights in the fisheries of its territorial waters, as well as jurisdiction over all matters in connection therewith. In the sea beyond territorial waters of a country, a subject of any country has by International law, the right to fish in common with the rest of the world unless he is restrained by the law of his country or nation.

The Common Law Right of British Subjects in Canada.

It has been decided by the courts of the land that the English common law is in force in Canada (except in the Province of Quebec, where the French civil law applies), with the exception of such parts only as are obviously inconsistent with our situation; whereas in the case of statute law its reception forms the exception. We are therefore justified in saying that the general principles of the English common law relating to the fisheries (save in the Province of Quebec) unless altered by Canadian Statutes, are in force in Canada. Such being the case under the common law in all waters within the territorial limits of Canada, subject to the flow and reflow of the tide, the public being subjects of the King, are entitled to fish, except where some person has by law secured from the proper authority a right exclusive of the public right, or Parliament has restricted the common law rights of the public.

"The Crown, before Magna Charta, could exclude the right of the public to fish, by granting a several fishery to a subject, and did so in many cases, but since that date this power has ceased to exist, and the public can now be deprived of this common right only by Act of the Legislature (see Halsbury's Laws of England, Vol. XIV. at page 374).

Federal and Provincial Rights

It is impossible to understand with any degree of accuracy the rights of the Federal and Provicial authorities in the Canadian fisheries without considering legislative jurisdiction, executive power, and proprietary rights. Legislative jurisdiction goes hand-in-hand with executive power. To fix the line which divides the field between the Dominion Parliament and the Provincial Legislatures is to fix at the same time the line of division for purposes of executive government. The sections of the B. N. A. Act—91 to 95—which distribute legislative power are the salient clauses upon which the whole scheme of Confederation turns. But there is a marked distinction between legislative jurisdiction and proprietary rights. Proprietary rights may be vested in the Crown in right of a province side by side with, and notwithstanding the legislative power of the Dominion Parliament over these subjects (see Western Counties Ry. vs. Windsor and Annapolis Ry., 51 L. J. P. C. 43), although the exercise of such legislative power may materially affect the proprietary rights of individuals or of a province. This is so in connection with the matter of the Canadian Fisheries. By section 91 of the B. N. A. Act it is provided that the exclusive legislative authority of the Parliament of Canada extends (inter alia) to "Sea Coast and Inland Fisheries." We can best get an idea of the scope of this clause by considering the decisions of the Judicial Committee of the Imperial Privy Council in the premises. In the Fisheries Reference (1898) A. C. 700; 67 L.J.P.C. 90) it is stated:—

"Their Lordships are of opinion that the 91st section of the B. N. A. Act did not convey to the Dominion of Canada any proprietary rights in relation to fisheries. Distinction must be borne in mind between rights of property and legislative jurisdiction. It was the latter only which was conferred under the heading 'Sea Coast' and 'Inland Fisheries' in section 91. Whatever proprietary rights in relation to fisheries were previously vested in private individuals or in the provinces respectively remained untouched by that enactment. Whatever grants might previously have been lawfully made to the provinces in virtue of their proprietary rights could lawfully be made after that enactment came into force. At the same time it must be remembered that the power to legislate in relation to fisheries does necessarily to a certain extent enable the legislature so empowered to affect proprietary rights. An enactment, for example, prescribing the times of the year during which fishing is to be allowed or the instruments which may be employed for the purpose (which the Dominion Parliament has authority to pass) might very seriously touch the exercise of proprietary rights, and the extent, character and scope of such legislation is left entirely to the Dominion legislature."

* * *

"If, however, the legislature purports to confer upon others proprietary rights where it possesses none itself, that in their Lordships' opinion, is not an exercise of the legislative jurisdiction conferred by section 91. If the contrary were held, it would follow that the Dominion might practically transfer to itself property whch has by the B. N. A. Act been left to the provinces and not vested in it."

Regulations controlling the manner of fishing, are undoubtedly within the competence of the Dominion Parliament. The question is whether they can be brought within the authority of the Provincial Legislature to enact in so far as they do not conflict with Dominion regulations. The Lords of the Judicial Committee of the Privy Council held that the enactment of fishery regulations is within the exclusive the exclusive competence of the Dominion Parliament, and is not within the legislative powers of Provincial Legislatures.

It must be borne in mind, however, that any provincial legislation relating to fisheries is not of necessity ultra vires. It is competent to enact a provincial law prescribing the mode in which a private fishery is to be conveyed or otherwise disposed of, and it could be properly traeted as falling under the heading of "Property and Civil Rights," and not as in the class "Fisheries" within the meaning of section 91. The provinces may also prescribe rules as to the terms and conditions upon which the fisheries which are the property of the provinces may be granted, leased or otherwise disposed of, and the rights which, consistently with any general regulations respecting fisheries enacted by the Dominion Parliament may be conferred therein are the subjects of provincial legislation under section 92 of the B N. A. Act.

Further, a provincial Act incorporating a company with power to catch and cure fish is not an Act in relation to "fisheries" within the meaning of this class, but falls properly within clause 11 of section 92 of the B. N. A. Act, "The Incorporation of Companies with provincial objects." (Re Lake Winnipeg Trans. Co., 7 Man. L. R. 255).

In the appeal of the Attorney-General for British Columbia v. the Attorney-General for Canada, decided on December 2nd, 1913, their Lordships of the Judicial Committee of the Privy Council decided:—

(1) It is not competent to the Legislature of British Columbia to authorize the Government of the Province to grant by way of lease, license or otherwise, the exclusive right to fish in any part of the waters within the railway belt of British Columbia. So far as the waters are tidal, the right of fishing in them is a public right, subject only to regulation by the Dominion Parliament. So far as they are not tidal, they are matters of private property, and all these proprietary rights passed with the grant of the railway belt, and thereby became vested in the Crown in right of the Dominion. The question whether non-tidal waters are navigable or not has no bearing on the point involved. The fishing in navigable non-tidal waters is the subject of property, and, according to English law, must have an owner, and cannot be vested in the public generally.

(2) Their Lordships declined to express any opinion as to whether the Crown has a right of property in the bed of the sea below low water mark, to what is known as the three-mile limit; because the right of the public to fish in the sea has been well-established in English law for many centuries, and does not depend on the assertion or maintenance of any title in the Crown to the subjacent land. The three-mile limit is different from the "narrow seas" limit, discussed by the older authorities, and its meaning is still in controversy as a matter of public international law. Therefore it is not competent to the Legislature of British Columbia to authorize the Government of the Province to grant, by way of lease, license, or otherwise, the exclusive right, or any right, to fish below low water mark in any part or parts of the open sea within a marine league of the coast of the province.

(3) The right to fish in areas of the sea and the estuaries of rivers is a public right of the same character as that employed by the public on the open sea. A right of this kind is not an incident of property, and is not confined to the subjects of the Crown who are under the jurisdiction of the province. Interference with it, whether in the form of direct regulation, or by the grant of exclusive, or partially exclusive rights to individuals or classes of individuals, cannot be within the power of the province, which is excluded from general legislation with regard to "Sea Coast and Inland Fisheries."

Fishing Regulations

Having considered the rights and powers of the Dominion and provinces in fishery matters, and having found that the regulation of the fisheries is within the exclusive competence of the Dominion, let us consider the manner in which the Dominion exercises the regulating power.

Besides the common law and statute law the law of the land, includes a great deal of what is termed "subordinate" or "delegated" legislation. Few statutes form a complete code in themselves, as to all the details relating to the subject with which they deal; and the extreme necssity for changes to meet conditions obtaining from time to time has led to an increase in the practice of delegating legislati power to executive authorities. This has been done to a great extent in the regulating of the Canadian Fisheries. Parliament in the Fisheries' Act. lays down general principles of law in connection with the administration and regulation of the fisheries, and delegates to the Governor-in-Council authority when it is deemed in the public interest to make regulations:—

(a) For the better management and regulation of the sea coast and inland fisheries;

(b) To prevent or remedy the obstruction and pollution of streams;

(c) To regulate and prevent fishing;

(d) To prohibit the destruction of fish;

(e) To forbid fishing except under authority of leases or licenses;

(f) Prescribing the time when and the manner in which fish may be fished for and caught;

(g) To prohibit the export or sale of any fish or any portion of any fish from Canada, or the taking or carrying of fish or any portion of any fish from any one province of Canada to any other province thereof.

Regulations made pursuant to the powers as herein mentioned as delegated to the Governor-General-in-Council by Parliament are known as "Orders-in-Council." They take effect from the date of their publication in the "Canada Gazette," or from the date mentioned for that purpose in the regulation promulgated. The regulations made by Orders-in-Council are of the same force and effect as if enacted in the Fisheries Act, notwithstanding that they extend, vary or alter any of the provisions of the Act respecting the places or modes of fishing. In passing an Order-in-Council prescribing fishery regulations care must be exercised to see that it does not exceed the authority delegated to the Governor-General-in-Council by Parliament, for if the Order-in-Council cannot be shown to be within the competence of the Governor-in-Council it is said to be ultra vires, and as a result is of no force or effect in law. Any violation of an ultra vires regulation, i.e., a regulation passed pursuant to and strictly in accord with the authority delegated to the Governor-General-

in Council by Parliament is a violation of the Fisheries' Act and renders the violator liable to the provisions of the Act for such a case made and provided.

The Province of Quebec

What has already been written herein in regard to British Columbia applies to all the other provinces of Canada except where the conditions found in British Columbia are not found in said provinces, save that it does not apply to any property rights in the Fisheries of the Province of Quebec held by individuals in that province or by that province itself prior ot Confederation. In the Province of Quebec the proprietary rights in the Fisheries would, it seems, be governed by the French law as it was, and now may be in force in that province. The Fisheries of Quebec are, however, subject to the regulating power of the Dominion in the same way and to the same extent as the fisheries of the other provinces of Confederation.

The Treaty Coast

The fisheries on the coast of Canada known as the Treaty Coast are subject to an easement in favor of the United States, as the fishermen of that country have the liberty to take fish on that coast. Canada has always taken the position that the liberty granted is a "common" one, and that consequently the fishermen of the United States must operate under precisely the same conditions os our resident fishermen are by law maintained without exception. That the United States compelled to act under; and that position has been has no say in the providing of regulations for the Treaty Coast was decided by the Hague Tribunal. The United States, however, have the right to object to the reasonableness of any regulation promulgated by Canada in connection with the Fisheries of the Treaty Coast. It has now been agreed between Great Britain and the United States that all future municipal laws, ordinances, or rules, for the regulation of the fisheries on the Treaty Coast of Canada made by His Brittanic Majesty's Government in Canada, in respect to (1) hours, days or seasons when fish may be taken on the Treaty Coast; (2) the method, means, and implements used in the taking of fish or in carrying on fishing operations; (3) and any other regulations of a similar character; and all other alterations or amendments of such laws, ordinances, or rules are to be promulgated and come into operation within the first fifteen days of November of each year; provided, however, that in so far as any such law, or ordinance, or rule shall apply to a fishery conducted between the first day of November and the first day of February, the same shall be promulgated at least six months before the first day of November in each year.

The agreement also provides that if the government of the United States considers any of the laws, ordinances, and regulations provided in the premises by Canada are inconsistent with the Treaty of 1818, it is entitled so to notify the Government of Great Britain within forty-five days after the promulgation of the law, ordinance, or regulation, and may require that the same be submitted to the permanent mixed Fishery Commission, consisting of an expert national appointed by each of the parties to the agreement, and an umpire, who is not to be a national of either party. If any law, ordinance, or regulation is not so notified within the aforementioned period of forty-five days, or which, having been notified, is declared to be reasonable and consistent with the Treaty of 1818 (as interpreted by the Hague) by the permanent mixed Fishery Commission, it is to be held to be reasonable; but if it is declared to be unreasonable, and inconsistent with the Treaty of 1818, it shall not be applicable to the inhabitants of the United States exercising their fishing liberties pursuant to the Treaty of 1818.

The two national members of the Commission are to be summoned by Great Britain and to be convened within thirty days from the date of the notification of Great Britain by the Government of the United States.

In the event of the two national members failing to agree, the full Commission, under the presidency of the umpire to be summoned by Great Britain to decide all questions concerning which there has been a disagreement.

The foregoing briefly outlines in general the legal position of the Canadian Fisheries. No endeavor has been made to treat the subject in detail; but an endeavor has been made to elucidate with sufficient particularity all the salient principles of the subjects dealt with; and it is hoped that what has been stated herein will be found of interest, and instructive to the reader.

THE FOGHORN

Through the moist grey fog booms the mournful moan
Of the foghorn out on the lighthouse lone,
O, doleful sounds! O depressing weather!
As kindred spirits, ye roam together.

Half-growl, half-groan from a monster mouth,
As it were some giant waxing wroth,
'Tis a warning word to all within
The hearing of the deep-voiced din.

Though a dismal sound to greet the ear
Of those on land who nothing fear
From wind-swept waves and breakers' teeth,
And silent shoals that sleep beneath.

Yet with greater charm than seraph strain,
The mariner hears its rude refrain,
When through the midnight mist and gloom,
In doubt and dark, bursts forth its boom.

—CECIL BOYD.

PRINCE EDWARD ISLAND

The fishermen in the vicinity of Tignish are all busily engaged in making preparations for the lobster season. It is the opinion of prominent packers that the number of men engaged in fishing this season will be greater than that of all previous years. Many minor companies have been formed and the resulting keen competition must certainly tend to raise the price of lobster. The highest price offered thus far in the Western end of the Island is $6, which is a considerable increase over that of last year.—Charlottetown Guardian.

NEW LIGHT AT POINT PRIM, BAY OF FUNDY

The revolving white catoptric light has been changed to a flash light. Flash every 7 seconds for half the time between flashes, or 3½ seconds the light will be totally eclipse. For the remainder of the time a light of 700 candle power will be visible, through which the stronger flashes will show. This change was made April 1st, 1914. Naked light, 700 candle power. Flashes 20,000 candle power. Illuminant, petroleum vapor, burnt under an incandescent mantle.

WHOLESALE FISH PRICES, MONTREAL MARKET.

(Quoted by D. Hatton Company.)

Trade is quiet in all lines of prepared, salted, dried and canned fish, but fairly active in fresh fish such as haddock and halibut. Stocks of green codfish and pickled herrings have been cleaned out and the outlook is promising for next season.

Smoked herrings are scarce, also domestic canned sardines in oil, and orders are booked ahead at pretty stiff prices.

River fish is more plentiful and some lake fish, such as trout and white are expected in larger quantities. Brook trout season opens up 1st of May, but no fish is expected for a few days; some of the lakes are still frozen up.

Halibut and haddock will be in good supply. Salmon still scarce.

Fresh Fish.

Halibut	per lb.	.11
Haddock	per lb.	.06
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Roe shad, piece	per lb.	$1.00
Buck shad, piece	per lb.	.50
Bluefish	per lb.	.13
Live lobsters	per lb.	.23
Alewives, apiece	per lb.	.03
Whitefish	per lb.	.13
Pike	per lb.	.08
Perch	per lb.	.05
Bullheads	per lb.	.10
Carp	per lb.	.08

Canned Salmon

Red Sockeye Salmon, 4 doz. case	7.35
Red Cohoes Salmon, per cs. 4 doz.	6.00
Pink Salmon, per cs. 4 doz.	4.00
Boneless Smoked Herrings, box	1.10

Smoked Fish.

Haddies, per lb.	.07½
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrinks, box	1.10

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.15	.16
Salmon, Red—Steel heads, per lb.	.12	.13
Salmon, Red—Sockeyes, per lb.	.09½	.10
Salmon, Red—Cohoes or Silvers, lb.	.08½	.09
Salmon, Pale Qualla, dressed per lb.	.09½	.08
Halibut, white western, large and medium, per lb.		.08
Mackerel, Bloater, per lb.	.07	.08

Frozen Fish—Lake and River.

White fish, large per lb.	.10	.11
White fish, small Tulibees per lb.	.06	.06½
Dore, dressed or round per lb.	.08½	.09
Pike, dressed and headless per lb.	.06½	.07
Pike, round per lb.	.06	.06½

Pickled Fish.

Salmon, Labrador, Tierces, 300 lb.	20.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C., Brls.	15.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.50
Herrings, Labrador, Half Brls.	
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs	1.25
Holland Herrings, imported milkers, half brls.	6.50
Holland Herrings, imported milkers, kegs.	.75
Holland Herrings, mixed, half brls.	6.00
Holland Herrings, mixed, kegs	.65

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brl.	
No. 1 Green Cod, small, brl.	
No. 1 Green Cod, Haddock, medium, brl.	
No. 1 Green Cod, Haddock, small, brl.	
No. 1 Green Cod, Pollock, medium, brl.	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	
Dried Pollock, medium and large, 100lb. bund.	
Dressed or skinless Codfish, 100 lb. cases	7.00
Boneless Codfish, Ivory Brand, 2lb. blocks, 20 lb. boxes, per lb.	.07½
Boneless Codfish, Dreadnought Brand, 2 lb. blocks, 20 lb. boxes, per lb	.06½
Boneless Codfish, strips 30 lb. boxes	.10
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes	.13

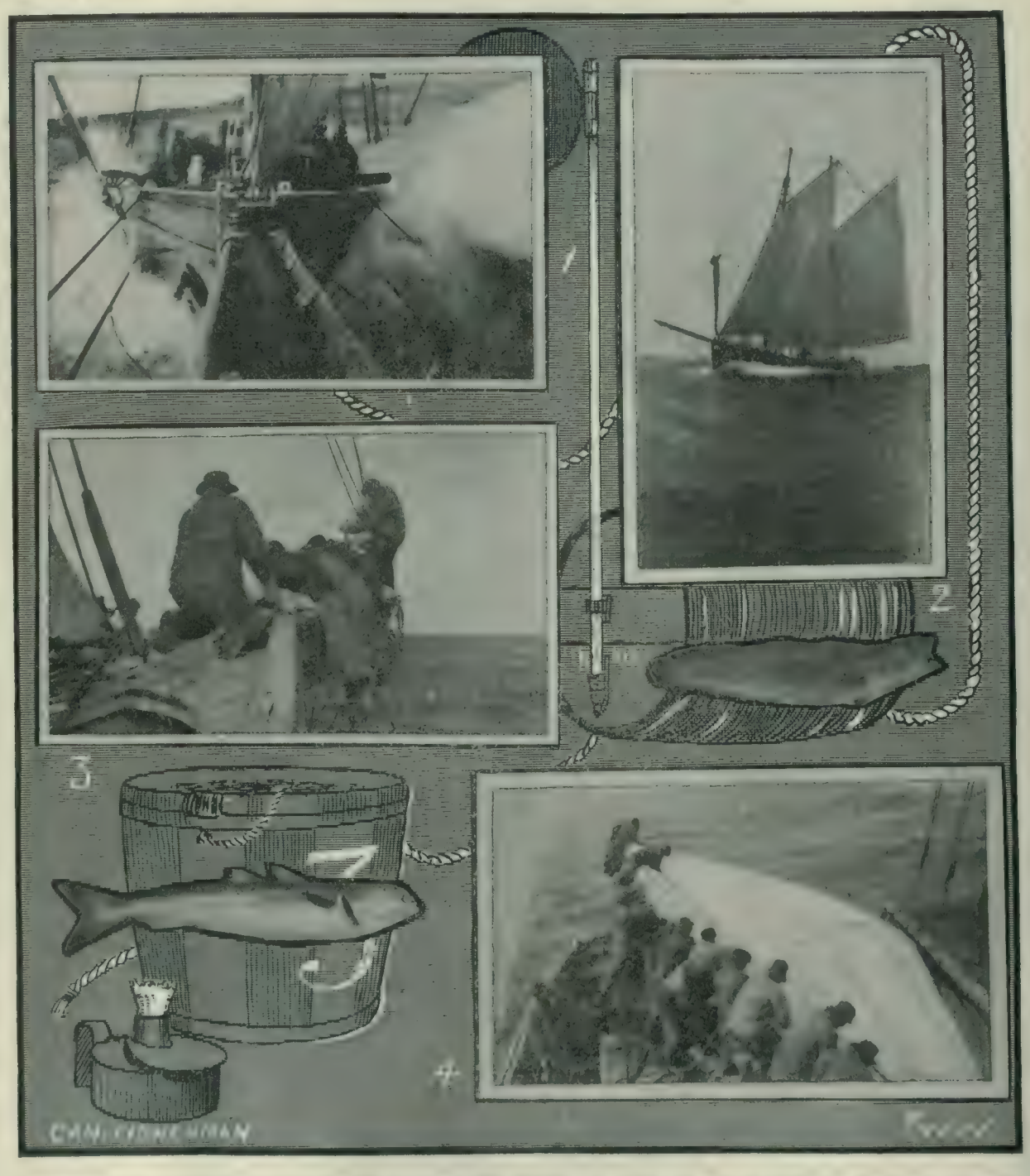
Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oystres, per barrel	9.00
Malpeque shell oysters, selected, C.C.I., per barrel	12.00
Malpeque shell oysters, selected J.A.P., per barrel	
Malpeque shell oysters, selected XXX, per barrel	
Malpeque shell oysters ordinary, per barrel	
Malpeque shell oysters, caraquets, per barrel	
Clams, per barrel	8.00
Mussels, per barrel	6.00
Live lobsters, medium and large, per lb.	.24
Boiled Lobsters, medium and large, per lb.	.25

NEW ASSISTANT FISHERIES SUPERINTENDENT

George L. Harris, barrister, of Moncton, has been appointed assistant superintendent of fisheries and will take up his duties immediately.

SNAPSHOTS ON A WINTER HADDOCKER



1. From the bowsprit end. A bone in her teeth. 2. On the Bank in windy weather. Mainsail reefed and jib triced up. 3. Furling the jib. 4. All hands reefing the mainsail.

—Photographs by F. William Wallace.

HADDOCKING ON BROWN'S BANK

By F. WILLIAM WALLACE

(Photographs by the author)

On March 18th, 1914, I hove my clothes bag aboard the Digby fishing schooner "Dorothy G. Snow" just as the gang was warping her down to the end of the wharf. "Look sharp now, you last minute men!" cried the Dorothy's skipper with a grin as a shipmate and I leaped aboard.

"Fisherman fashion," said I. "Never believe in coming aboard until the mainsail's hoisted."

While coming to J. E. Snow's wharf we passed a Weather Bulletin Board with the probabilities—North East gale and snow. Not very promising conditions for going to sea, but fishermen are notorious for taking chances and skinning out between gales. However, in our case, we had barely had the sail on the schooner more than twenty minutes before the propphesied weather began to show up.

The "Dorothy G. Snow" and her skipper, Captain Ansel Snow. This vessel is the high line haddocker for the season, stocking $22,011.73 from Sept. 19th to April 14th.

"No use getting outside in what's coming," remarked the skipper. "It will be dark soon and nothing will be gained by getting out in the Bay of Fundy with a snowy northeaster. We'll run back and anchor 'til it clears up." So, putting the wheel up, we ran back to the anchorage off the Government Pier, let go the anchor, and furled sail.

From March 18th to the 22nd we hung to the mudhook while Old Boreas blew gales from all points of the compass. Rain, snow, squalls and freezing weather pelted our little vessel lying out in the Annapolis Basin and we, who remained aboard, hugged the cabin stove and thanked our stars we were not bucking the sea down on Brown's those days. The sun was crossing the equinox and such weather was to be expected, and in the lay-off while the "Line Gale" continued, the men overhauled their gear—glad of the chance for leisurely work after a winter of hard fishing.

Digby, Nova Scotia, boasts of a famous little fleet of fresh fishermen and the men who man the Digby trawlers are second to none on the Atlantic. Digby's fishing skippers are celebrated for the big stocks in the fresh fishing and their 95 ton schooners, small enough for winter fishing compared with the big craft out of Boston and Gloucester, have made names for themselves among the trawlers from Georges to Western Bank. It takes good nervy skippers and hardy rugged crews to stand the drag of winter haddocking offshore in 90 foot schooners and it reflects creditably on the Digby fishermen when in the vessels of their own home fleet they can make as good, if not a better living, than the trawlers out of the large United States fishing ports.

The Canadians of our Atlantic coasts are all good fishermen, and while the Digby men can claim to be

high liners in the fresh fishing off-shore, the Lunenburgers have the salt fishing down to a fine art with their beautiful, able fleet of 125 vessels engaged in that particular business, and for lobstering and boat fishing you can pick up smart men from almost any fishing village in the whole Maritime Provinces. Farming, fishing and seamanship comes second nature to the men of the Eastern Provinces and they can handle a plow, yoke of oxen, trawl, dory and vessel with equal skill.

The "Dorothy G. Snow" is the latest vessel of the Digby fleet. She was designed by McManus of Boston, on modified knockabout model, and built by Mc Gill of Shelburne, N.S., in 1911, for Captain J. E. Snow, of Digby. Her dimensions are 98 feet in length 23 feet beam, 9 feet 8 inches depth of hold, and a net tonnage of 98 tons. When the writer joined her she was in winter rig—four lowers only— and fished with a ten dory gang under the command of Captain Ansel Snow.

Some prime haddock on deck. This kid holds 9,000 pounds of fish.

SUNDAY, MARCH 22nd. The gale had blown itself out and the morning broke fine, clear, and sunny with a light breeze from the S. W. After breakfast at 6 a.m. we hove short of the anchor and proceeded to get underway for Brown's Bank in company with the schooners "Albert J. Lutz" and "Dorothy M. Smart"—two smart semi-knockabouts aboard which the writer has made several previous Banking trips. By seven we had all the patch hoisted, the anchor to the cathead, and the vessel sliding out through Digby Gut with the "Smart" and "Lutz" following. After passing Point Prim, our crew had settled down to the usual sea routine aboard of a fisherman and the watches were told off—one man to the wheel and his dory-mate to the look-out. Noon. Wind very light. The "Lutz" has struck a calm spot and is far astern, but the "Smart" has picked up a breeze and is coming along fast. She is a smart vessel in a light wind and Captain Will Snow is ghosting her along in great shape. 4 p.m. The sun has retired behind a smoky mist and the barometer is falling. Wind hauling to the N. E. Captain Ansel, who has some reputation as a weather prophet, declares that we will have wind and snow before morning. 6 p. m. Cold, sky overcast, wind rising. The "Smart" has overhauled us and is ahead on the weather bow. 7 p. m. The skipper's forecast is right. It is now breezing sharp from the N. E. with snow and the night is as dark as the inside of a trawler's boot. The vessel is romping along to the south'ard under four lowers and a bone in her teeth with Petite Passage light flashing ahead on the port bow. 8 p. m. Wind and snow coming away heavier. Skipper has decided to run the vessel through Petite Passage into St. Mary's Bay rather than keep her out in the Bay of Fundy in a snowy northeaster. 8.30 p. m. Heading in for the passage. 9 p. m. Shot in through the Petite with the light illuminating our decks and sails as we stormed past it with the wind and tide. The water is deep close up to the rocks and a vessel could poke her bowsprit over the beach before she'd strike. Fred Dillon, my bunkmate, and I were for'ard on look-out when we swung past Match Point and he pointed to the surf gleaming in the darkness. "If we ever struck there with this wind and tide there would be neither vessel nor men left to tell the tale. Listen to the roar of the tide going past the Point!" I could hear it alright. It was only a biscuit toss away, but having had long experience with fishermen's navigation around Nova Scotia coasts, I wasn't worrying any. They have very few accidents and I've known skippers who have come down the coast in a breeze by following the gleam of the surf under their lee. 9.30 p.m. With jumbo weathered up, mainsheet started and wheel down we are jogging in St. Mary's Bay under the lee of the land. Snowing heavily, pitch dark, but the force of the wind can hardly be felt as Long Island is to windward.

MONDAY, MARCH 23rd. Weather cleared after midnight and the wind hauled to the west'ard. At 2 a. m. we drew away on the jumbo, wore ship, and stood down the Bay to the south'ard again. 8 a. m. Cape St. Mary's abeam. Run down inside of Trinity Ledge and had Cape Forchu abeam at 10 a. m. Fresh westerly breeze. 1 p.m. Passed Seal Island and put the log over. Steering south from Seal Island. Vessel running at a great clip for the Bank with the westerly shoving her along. 4 p. m. Made about 38 knots by log, so brought the schooner to wind and took a cast. Fifty-five fathoms and grey sand on the butter. Vessel now on the northern edge of Brown's Bank. Triced up the jib, reefed the mainsail and furled it. Under foresail and jumbo we jogged during the night while a heavy swell had the "Dorothy G." rolling about like a can buoy in a tide rip. I have a comfortable bunk under the run aft of the cabin this time so don't mind the rolling. Two years ago I made a winter trip to Brown's Bank and slept on a locker without a mattress for fourteen rough days, therefore I can appreciate small comforts.

Deck scene. Dories all out. One dory on the tackles ready for launching.

TUESDAY, MARCH 24th. "He-e-ey ye go, fellows! Top dory in the air! Breakfust!" On the hail we crawled out and went down into the forecastle for breakfast at 4.30 a. m. Though hazy and cold with a heavy swell it was fishing weather and at 5.30 we had the ten dories over with three tubs of baited trawl in each. One tub sets were the order of the day and the boys dipped the gear in 55 to 60 fathoms with a fine grey sand bottom. For bait we used frozen Newfoundland herring and fine looking fish they were. On the "Dorothy G." we fished by count—a method which calls for smart men and an everlasting over-hauling of trawls to keep up to the mark and away from low dory stocks. Using the usual haddocking trawl some of our men had tubs running as high as ten shots though seven lines is the regular length.

7. a. m. All ten dories striking haddock and coming alongside the vessel and discharging fish after setting and hauling each tub. Noon. On fish. Weather none too good. Several snow squalls struck in while the dories were out and the skipper passed the word. "If it starts to breeze, cut your gear and come aboard. I've heard that caution passed often enough but I never saw the fisherman yet who would cut and come aboard while fish were striking good. The trawl would have to part at the roller before such a command was obeyed. 2 p.m. Fining up but choppy and cold. Some of the boys who set on hard bottom have lost some of their gear. The bulk of the fish are haddock, with a few cusk from off the hard bottom. 8 p.m. Dories all aboard and nested after setting tub and tub all day long. Thirty-four thousand pounds of fish, mostly haddock, with a few scattering cusk and cod constituted the day's fishing. All hand turned to and dressed the catch —gutting and cleaning the fish and stowing them away in chopped ice down in the hold pens—until midnight.

The work did not cease when the last haddock had been stowed, for the men had to bait up their trawls again ready for an early morning set. March weather is unreliable, and when it holds fine enough for fishing it is a case of fish until it starts to breeze up, so sleep is scarce on a hard driving haddocker when the weather is good. The Lenten market, with good prices and a big demand for fish, was waiting for our trip, and our skipper was out to get a trap before the next blow commenced.

WEDNESDAY, MARCH 25th. With from four to six tubs of seven, eight and nine shot trawl to bait up after midnight, some of our boys were still working when the cook sung out "Breakfast!" at 4 a.m. The lucky ones who had tubs baited managed to steal an hour's sleep before they were turned out. 6 a.m. Fine, clear and sunny. Dories away setting tub sets, using sling-dings instead of anchors on their first ends. We fished to

windward and leeward when the tide was running and the high and low water slacks. There is quite a tidal current running on Brown's. Due south of the Seal Island and on the northern edge of Brown's the tidal current sets east and west of the Island. On the southern edge of the Bank the current sets to the west'ard.

Fished all day in 55 to 57 fathoms sandy bottom, with rocky spots here and there. Haddock running large with a number of cusk, cod, pollock, hake and halibut. 6 p.m. Dories all aboard and nested. Twenty-five thousand pounds of fish on deck to be dressed down and stowed away. Dressed down by torchlight until midnight, then all hands turned to and baited up their gear again. Hard driving for the sleepy ones.

THURSDAY, MARCH 26th Several of the boys had no sleep—baiting up until breakfast at 4 a.m. Going from Tuesday before daylight until Thursday without sleep and working hard is some drag for the very toughest of fishermen, but it is a case of "no kinks while the weather and the bait lasts. Time enough to catch up on sleep when we hit the next breeze." 5 a.m. Dories away to make the dip, with four tubs to a dory. Strong southerly wind blowing, and confused sea. Vessel tending dories under reefed mainsail, foresail, and jumbo. Noon. Breezing up sharp, but the men are hanging out in order to make a day of it. Rough sea, cold and stormy looking. Fish are thinning off on the last tubs and we are on hard bottom. 2 p.m. Dories all aboard and nested. Sixteen thousand five hundred pounds of haddock, cod, cusk, pollock, and hake on deck for the day's fishing. Dressed down fish and baited up again. 6 p.m. Took in the mainsail and hove to on starboard tack under foresail and jumbo. Dirty night. American schooner "Francis J. O'Hara, Jr.," spoke us and Am. Schr. "Premier" passed bound for Boston. No vessels in sight, though there is a big fleet on Brown's. Expect we are away to the eastward. We made the Bank to the east of Seal Island, and the prevailing tidal current has driven us further east.

FRIDAY, MARCH 27th. Breakfast at 5 a.m. Strong breeze from the S. W. Vessel pitching and rolling. Sky overcast. The boys managed to catch up on sleep last night while the vessel bucked the Bank swells, hove to under foresail and jumbo. After breakfast all hands turned to overhauling and baiting up gear, but it does not look like fishing weather to-day. Noon. Schooner "Albert J. Lutz" spoke us, and her skipper, Captain John Apt, came aboard for a yarn. We entertained the visitors from the "Lutz" with a concert upon the ship's Edison Phonograph—the writer doing the honors, winding up the machine, selecting the records, and holding the instrument down on the locker to keep it from fetching adrift with the antics of the tumbling vessel. As we possessed a suit-case full of good records, the concert was quite a lengthy one, and spoke well for the ability of the phonograph to play while the schooner rolled and pitched in a heavy sea. 8 p.m. Rough, dirty night. No dories over during the day.

Dories coming alongside.

SATURDAY, MARCH 28th. Raining, sky overcast. Dories away at 5 a.m., and set one tub apiece. Brought aboard about 2,000 pounds of haddock. Wind breezing up from the east'ard with all the signs of a long March easterly. Captain Snow would like to hang on for another day to make a hundred thousand trip, but the probabilities point to a succession of hard breezes and no fishing for several days. All hands debating as to the possibility of our "keeping off" for home. 9 a.m. Raining hard. Cold. Somehow or other I always manage to get a "homeward bound" wheel. I was twirling the spokes when Captain Snow sung out "Let her go no'the!" and instinctively I knew we were giving her "Mainsheet for home!" 10 a.m. Set riding sail and jib. Strong scupper breeze. 11 a.m. Took in riding sail and set reefed mainsail. 1 p.m. Made Seal Island—vessel logging 12 knots. 4 p.m. Passed

Gannet Rock. Wind dying away. Count tally board show 3,018 fish for the high dory. Average count for all dories around 2,500. 8 p.m. Cape Forchu light abeam. Vessel just making steerageway. Shook reef out of the mainsail while off Seal Island. 9 p.m. Breezed up sharp from N.N.E., and we were soon logging 12 knots again. Passed inside Lurcher Lightship. then came about and stood up inside St. Mary's Bay.

SUNDAY, MARCH 29th. Wind N.E. Freezing hard and vessel making ice. Decks covered with slush and ice. 5 a.m. Passed through Petite Passage into the Bay of Fundy. Fine, clear, but bitterly cold. Iced up a little for'ard. Standing up for Point Prim on short tacks and logging 12 knots. 11 a.m. Point Prim abeam. Standing in to Digby Gut. Noon. Moored at J. E. Snow's wharf, Digby, N.S.

Upon arrival we found that the "Dorothy Smart" had arrived on the Friday with a big trip, so there was plenty of fish in to supply the western market for Lent.

In Digby, on Monday night, thousands of fresh haddock, dressed and cleaned, was hanging in the smokehouses of the firms mentioned. On Tuesday's steamer a goodly cargo of neat wooden boxes containing prime light smoked finnan haddies went forward to supply the Lenten demand. On Wednesday they were for sale in the various retail stores in Montreal.

It makes quite an interesting record to follow the fish from sea to table, and the foregoing account will help to give some idea of the hardships and difficulties which have to be overcome in order to supply the inland markets. From Brown's Bank to Digby, as the crow flies, it is about 145 miles, but in sailing vessels, with rough weather and wind ahead or calm, it cannot be done in a stated number of hours. In our case, we must have traversed nearly 200 miles from the Bank to port, as we had a dead beat for a large part of the route. Add to that the distance from Digby to Montreal—about 500 miles—and it will be seen that

Flying sets. Dories being towed to their berths.

On Monday morning we got the hatches off and commenced discharging our fare, which amounted to 59,800 pounds of haddock, 7,200 pounds of cod, and 9,200 pounds of cusk, hake, pollock, and halibut—a total of 76,200 pounds. For two and a half day's fishing and exactly a week in making the trip to the Bank and back, it was smart work, but we had to admit with regrets that Captain Will Snow, in the "Dorothy Smart," had "put one over us" by bringing in a hundred thousand pounds inside of six days. However, we cannot always be "high line."

With these two big fresh fish fares in, the shore plants of the Maritime Fish Corporation, Joseph E. Snow, and D. Sproule & Company worked overtime. On the Monday's steamer to St. John a large shipment of our fresh fish went to the western markets, arriving in Montreal on Tuesday morning and in Toronto market Wednesday morning. Thus, within five days from the time the fish were pulled out of the water the consumer in Montreal was eating his fresh haddock or cod.

our last big catch of fish caught on Thursday, March 26th, was transported some 700 miles from sea to table, and were being eaten on Tuesday, March 31st. This, it must be admitted, is quick work, considering that we did not leave the Bank until Saturday morning, and a Sunday intervened.

Regretfully I said good-bye to my shipmates and took the trail westward to the editorial sanctum, and as I write this log my fancy runs back to the rolling wastes of foam-capped sea, the able vessel driving for Bank or port in the savage scupper breezes, the wildly tossing dories, and the hard toil of daylight and torchlight of the gallant fellows who go afishing that the markets might be supplied.

THE BEST FISH STORY.

(Ottawa Citizen).

The Canadian output of canned salmon is estimated at from $8,000,000 to $10,000,000 per annum. This is the biggest and best fish story yet told in the Dominion.

WHO'S WHO IN THE FISHING WORLD

In former Who's Who columns, the CANADIAN FISHERMEN has featured the gentlemen engaged in the scientific and legislative end of the fishing industry of Canada, therefore it is only right and proper that we give the commercial men a turn. Engaged in exploiting the sale of food fishes to the Canadian consumer are many able and experienced men, but there are few better nown from coast to coast than Alfred H. Brittain, Managing Director of the Maritime Fish Corporation, Ltd., a company who operate a general fish business upon the Atlantic coast with branches at Digby and Canso, N. S., and hear offices at Montreal.

Mr. Brittain is a "live wire" in the fish business. You only need to talk to him five minutes and you will find that out. Even if you knew nothing whatever about fish and cared less, a short conversation with him would make you an enthusiastic fish eater. He could give you in ten minutes more data regarding the economy and nutriment to be got out of a pound finnan haddie or a box of shredded codfish than any High Cost of Living expert could in a lifetime of study. And, what is more to the point, he believes it, too.

The selling end of a general fish business in Canada is a hard proposition. It is no sinecure at the present time, but when Mr. Brittain took it up in 1904 he found a hard row to hoe. At that time, he took up the boneless codfish and it stands to his credit that he succeeded in placing the first boneless codfish of supeior quality before the trade in Canada. Nowadays, boneless and shredded codfish is a staple article and to be procured at almost every retail store throughout the Dominion—a fact which reflects creditably upon the energetic manner in which our subject handled the business.

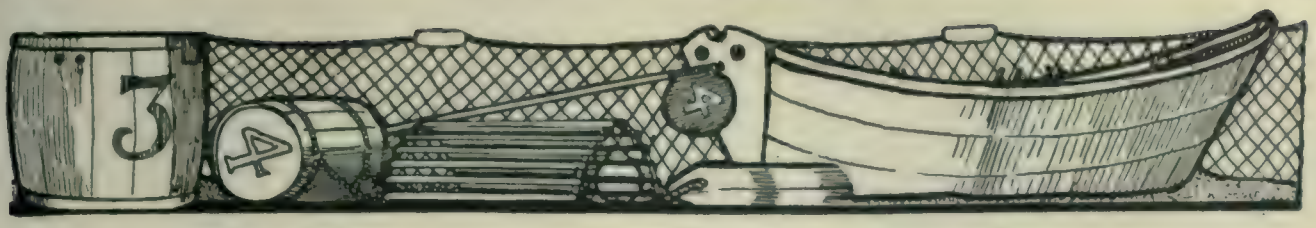
When a young man of ambition, ideas, and the ability to carry them out, goes into a business which he makes a hobby of, he cannot help but succeed. Mr. Brittain thoroughly enjoys his connection with the fishing industry; he is a young man—thirty-six, to be exact—and he has executive ability and ambitious ideas. The boneless codfish business alone did not offer a big enough field for his efforts, so he expanded into a proposition to tackle the whole field of the fish trade—fresh, smoked, boneless, salted and dried, and to that end he, with other prominent men in Montreal and the Maritime Provinces organized the Maritime Fish Corporation in 1910.

With the larger proposition his work became heavier in the way of developing a market for food fish in Canada—especially the fresh fish market—but he tackled the task vigorously, and to-day the corporation of which he is manager is carrying on a successful trade from the Atlantic to the Pacific.

Much to Mr. Brittain's success is due to the knowledge he possesses of both the producing and selling ends of the industry. He is intimately acquainted with the conditions which govern the fishery and understands just what the fishermen have to put up with at various seasons of the year. He keeps in daily touch with the weather conditions on the coast; how the bait supply is holding out; the dog-fish runs, and the "fishing weather" on the various grounds. This practical knowledge enables him to figure out pretty accurately the supplies of fish coming in, and he can, with this data and a knowledge of inland markets, determine what is best for the disposal of the catch. Montreal is a long way from sea, but you can ask Mr. Brittain at at almost any time when he could supply you with a carload of strictly fresh fish and he will name the day. "How do you know?" you may enquire, and he will answer in this wise—a sort of Sherlock Holmes method of deduction. "The schooner So-and-So went out to Brown's Bank eight days ago. She was spoken on the Bank by Captain ———, and had forty thousand lbs. of fish aboard then. The weather has been good for the last three days down east. They'll fish hard and come in with a hundred thousand by Saturday. I'll ship you fish on Monday. You'll get it on Tuesday in Montreal." And ten chances to one, he can make his words hold good.

Our Who's Who has absorbed something of the spirit of the sail dragging fishermen who supply his company. When away from the desk and business, he is an enthusiastic yachtsman and has on several occasions formed part of a racing crew on Cup challengers and defenders. The Brittain Fishermen's Sailing Trophy—a magnificent silver cup—was donated by him to the fishermen of Nova Scotia to be raced for by fishing schooners out of Digby.

With an optimistic spirit and an enthusiasm for the industry he is connected with, Mr. Brittain is destined to become a still more important factor in the developmen tof the fish business in Canada. The CANADIAN FISHERMAN wishes him all success in his efforts to create a larger market for the products of the men who toil upon the harvesting-grounds of the sea.



THE ATLANTIC FISHERIES

LUNENBURG, N. S.

(From Our Special Correspondent).

The weather during the past month has not been as favorable as it might have been for the fleet that sailed for the banks with frozen bait, owing to the very high wind and seas, which prevailed most of the time.

About fifteen or twenty of the early fleet have returned home during the past fortnight with catches averaging about 400 quintals each, of which fully half are scale fish, the balance codfish. These fish are now in the hands of the fish-dryers, to be prepared for marketing, and the producers, owing to the scarcity of fish on the market at present, are looking for very high prices for the commodity. Several of the masters of the vessels which have arrived home state that in all their experience they have never seen the weather conditions so unfavorable for fishing as they were the past month. The remainder of the first fleet have returned from the fishing grounds, but did not come home to land their catches, some few taking another supply of frozen bait and going out again, the remainder proceeding along the coast in quest of fresh bait.

Owing to the prevalence of ice in great quantities in the bays and harbors of Nova Scotia and Prince Edward Island, also at the Magdalen Islands, where the most of the herring used for bait are taken, the outlook for the spring catch is not very encouraging, as it has been impossible up to the present for any of the fleet to get there, and the conditions at time of writing are still the same. However, we all hope for the best.

One sad occurrence in connection with the early fishing was the drowning of three men from the schooner "Associate," Captain Alfred Backman. The victims were two brothers, David and Hibbert Cleveland, and Henry Rafuse, all belonging to Blandford, Nova Scotia. They left their vessel in the morning to set their trawls, and, not returning, the captain sent another boat to see what the trouble was. Nothing being seen of them, a thorough search was commenced, in which they were aided by several vessels in the vicinity, but without success, and it was supposed that in setting sail on their dory on their return to the vessel, they managed to upset the boat in some way and all three were drowned. The sympathy of the community goes out to the relatives and friends of the unfortunate men, who were thus cut off in the prime of life.

ROSE BAY AND RIVERPORT, N. S.

(From Our Special Correspondent).

The fishing fleet of these two places consists of about 30 sail. The majority of them have taken frozen bait and gone to thhe Western Bank to fish it. Four of them have returned with good fares, varying from 400 to 450 quintals.

Many of them will have to take a second frozen baiting. This is very unusual, and is due to the great masses of ice in the straits, and thus preventing them from going north.

There are also a large number of shore fishermen here, who are now busily engaged in the lobster fishery. This industry has been greatly benefited by Daniel Deal and James Backman, who have erected a large factory to accommodate these fishermen. This gives them a ready market for their lobsters and also enables them to get the highest price.

ST. JOHN, N. B.

(From Our Special Correspondent).

Wholesalers have been getting stocks from Bay of Fundy ports more freely, but prices rule high. They have been able to supply their trade, but have not been working for new business. Some of the salt cod delivered here recently has been of an exceptionally good quality. Wholesale groceers who handle salt fish as a side line have had great difficulty getting supplies. All winter prices of medium cod here have been higher than in the ports of Portland and Boston, and at various times better prices have obtained here for small cod.

Wholesale quotations here are as follows:—

Small dry cod	4.75	to	5.00
Medium dry cod	7.00	"	7.25
Pollock	0.00	"	4.00
Grand Manan herring, bbls.	0.00	"	5.00
Grand Manan herring, half-bbls.	0.00	"	3.25
Smoked herring	0.14	"	0.15
Fresh haddock	0.03½	"	0.04
Pickled shad, half-bbls	8.00	"	12.00
Fresh cod, per lb.	0.03½	"	0.04
Bloaters, per box	0.80	"	0.90
Halibut	0.10	"	0.15
Kippered herring, per dozen	0.00	"	0.13
Swordfish	0.12	"	0.13

Some of the dealers here have been importing fresh haddock from Boston.

Andrew Lamoreaux has purchased the fishing rights on Lots No. 4, 5 and 6 at Navy Island. He only paid $25. Last year these lots were sold for $402.

The harbor fishermen have opened their season. Gaspereaux started running a short time ago, but neither the weirmen nor the net fishermen have made any considerable catches as yet. Unusually cold weather has prevailed recently.

St. John harbor fishermen are talking of forming a protective union.

Members of the Federal High Cost of Living Commission were in St. John last week and took evidence in regard to the fish business. John McDougald, chairman of the Commission, remarked after hearing the evidence here that one remedy for the high cost of living was to eat more fish, as it was cheaper than meat.

NEW BRUNSWICK NOTES

(From Our Special Correspondent).

Gaspereaux fishing has been in progress along the coast of St. John county for some time, and fair catches have been made. Considerable quantities of gaspereaux have been shipped to Digby to be used as bait. There has also been a demand for gaspereaux from Grand Manan and other islands in Charlotte county, where there has been need of bait.

* * *

Fishermen on Grand Manan coast and the coast of Charlotte county have been handicapped by the scarcity of bait. Owing to the difficulty of getting bait the early spring cod-fishing was not a success, but it is hoped that with the appearance of gaspereaux the cod fishermen will be able to carry on operations more satisfactorily.

* * *

The lobster fishing latterly has been rather poor. Strong weather has caused considerable damage to traps. Prices of lobsters have continued very high.

* * *

The opening of the sardine season has been backward this year. Some schools have appeared at different points in Charlotte county, but at present writing reports say there has been little or no fishing. J. F. Calder, chief fishery officer for St. John and Charlotte county, said the other day that cod caught along the coast were full of sardines, and it is feared that the pursuit of the cod has had something to do with the failure of the sardines to appear at their old haunts at the usual time.

* * *

Fishermen of Lorneville have decided to form a protective union. At the preliminary meeting Geo. H. Galbraith was elected provisional chairman and Samuel Ferguson secretary. A committee consisting of the chairman and secretary, with William T. Galbraith, Andrew Galbraith, Alexander McAllister and John Byers was appointed to draw up a constitution, and also to interview the Minister of Marine and Fisheries to ask for certain changes in the regulations. The union proposes to ask the fishermen of St. John Harbor, Musquosh, Chance Harbor and Lepreaux to affiliate.

* * * *

Some curing concerns in Charlotte county have been importing haddock for smoking purposes from Boston last winter. Charlotte county has no large vessels engaged in the off-shore fisheries.

* * *

The proposition of the St. John Hydro-Electric Co. to build a dam across the St. John River at Meductic has been turned down by the Legislature. A large delegation of St. John fishermen went to Fredericton to oppose the company's bill on the ground that damming the river would ruin the salmon fishery. In the delegation were A. O. H. Wilson, Elijah Toole, Geo. Cobham, Frank Lamoreaux, Wm. Harned, John Christopher and George Lord, of St. John; Fred. Thomson and Charles Abbotts, of Chance Harbor; Anthony Thomson, of Dipper Harbor; Oscar Hanson, of Lepreaux; W. J. Wilson, Alex. McAllister, Wm. T. Galbraith, S. R. Wenn, John Byers, Andrew Galbraith, Jos. Galbraith, Geo. H. Galbraith, Wallace Galbraith, John J. Galbraith, Thomas J. Galbraith, Henry Baird, William Downey, Sydney Evans, Wm. Steeves, Samuel McCavor, Milford McAllister and Michael Driscoll, of Lorneville.

Although the management of the Canadian Sardine Company announced some time ago that they were making arrangements to resume operations in their big plant at Chamcook this spring, the latest report is that their plans have fallen through and that the affairs of the company have been placed in the hands of a receiver.

CANSO, N. S.

(From Our Special Correspondent).

The lobster fishing season in this vicinity opened on April 1st according to the law, but the weatherman said differently, and after all, its often what the latter says that "goes," particularly in the lobstering. One is safe in stating that the backwardness of the spring in this section constitutes a record for a good many years back, at least. The memory of the oldest inhabitant cannot recall such an exceptionally unseasonable month as April has been. One of our longest-experienced lobstermen, in conversation with the writer a little later than the middle of the month, said that he had not been able to get any traps out up to date, which he declared to be the very latest since he had been engaged in the business. The prospects are that very little will be accomplished during the month of April. Such unfavorable conditions at the start, together with the lopping off of the last ten days of June by the authorities, will make the actual fishing period very short indeed. The redeeming feature in the situation is the good price at which the buyers open, which is $5.00 per cwt. and 12 cents for market lobsters.

For several weeks past our harbor has been sheltering a comparatively large fleet of Nova Scotian and American fishing schooners in search of bait. They are all waiting anxiously to reach the Magdalene Islands for herring, but everything North seems to be blocked with ice The latest telegrams indicate that these conditions are unchanged as yet, the ice remaining master of the situation. Canso's ice-dealers and merchants, as well as the motion picture show, have benefited from the increased trade in supplying the wants of the fleet.

On Monday, April 13th, the Gloucester schooner Bay State, Capt. Norman Ross, during a piping nor'wester, parted her cable and, drifting down the harbor, picked up on the outer end of the Breakwater. S.S. Robert G. Cann, prevented by the storm from making her daily trip to Mulgrave, made several unsuccessful attempts to float her. After remaining thus for several days, the tug Cruizer, from Halifax, pulled her off, when she was found to be in as good condition as ever. Several of the crew are Canso boys, while some others including the captain, hail from other parts of Guysboro county.

YARMOUTH, N. S.

(From Our Special Correspondent).

In this portion of Nova Scotia the month of April has shown considerable improvement in all lines of fishing over the first three months of the year. The weather, however, has been cold and boisterous and has interfered with the business considerably. During the first part of the month the boat fishermen were all occupied in getting their boats ready, but quite a number of them are now making regular trips. During

the past week or ten days there has been more craft of all sizes clearing at the custom house than for some time past; in fact, the harbor just now is a busy sheet of water, as not only is it full of local boats and vessels, but there is a large number of lobster smacks from Maine—some from Portland, some from Machias, some from Rockland—but all here to buy up live lobsters on the grounds and carry them to their home ports. Every spring there is quite a number arrives, but this spring the number seems to have more than doubled.

As foretold in my last letter, Henry A. Amirault's fleet of halibutters—the Nathalie, Nelson A., and Eddie James—are all making good, and the others of his fleet—the Dawn, Edith F. S., and Francis—are about ready to go into commission as handliners. The schooner Vice Reine (formerly the sloop of that name), owned by Hugh McManus, and which has received an extensive overhauling the past winter, has gone into commission and cleared for the grounds this week, and the Viola, a former American fisherman recently purchased here and put under the Canadian register, will be fishing in a week or two. By the way, this Viola is one of a fleet of four American fishing vessels which have been laid up here for some years. They belonged to Oliver F. Kilham, of Beverley, Mass., who died last year, and these vessels were sold during the last month to settle the estate. Two of them—the Grace Darling and the Oliver F. Kilham—were purchased by Captain John Snow, of Digby, and have already gone to that port to be overhauled preparatory to joining the Digby fleet; the Viola was sold to John Potiero, of Eelbrook, this county, and the fourth, the James R. Clarke, to Captain Anderson, of Clarke's Harbor. It is not likely the last-named will continue in the fisheries, but the others will. The local fleet has been augmented by the purchase of several large sloops from the south shore—some of them by men who are not fishermen but who intend to try their luck during the present season. The schooner Venite, which was ashore last year on the Bay of Fundy shore and which was pronounced a total loss, was floated with very little damage, and now, newly painted and decorated, is again ready to go into commission. Her skipper humorously says that running ashore did her good; she leaked a little previous to that, but since she has been floated she is as tight as a bottle

The Gateway Fish Company, Limited, although not yet ready for business, are showing signs of activity and manage to keep in the public eye. They have received their charter this month and seem to have secured the rights to prosecute every branch of the trade, and to acquire everything necessary to do it with. This company is in the hands of progressive young men, and if energy and ambition will make it a success, they can furnish the necessary elements. It has just acquired all the rights and possessions of the Westport Packing Company, Limited, of Westport, a company which was organized for the purpose of shredding and packing boneless fish. The company had a good plant for the purpose and this plant will be removed to Yarmouth and installed on the Gateway Company's wharf. Your correspondent has not heard what was paid for the property, but was told the Gateway people acquired it at an exceedingly low price.

The presence of the American lobster smacks and the fact that a new steamship line between Nova Scotia and Maine went into operation on Monday, the 27th, will probably cut down the lobster exports from this port for the remainder of the season. The steamer Atlantic is supplying the service on the new line, which, although it has its terminal outside Yarmouth county, has its principal ports of call in the county. The steamer is supposed to leave Clark's Harbor for Rockland, Maine, every Monday and Thursday, and it will pick up a large portion of its cargo among the Tusket Islands This steamer, with the smacks, will carry tens of thousands of lobsters which would otherwise be shipped through Yarmouth.

On Sunday, April 12, and the following day, we had a gale which did thousands of dollars' worth of damage to the gear of the lobster fishermen, especially to those between Tusket Islands and St. Mary's Bay. On the Bay of Fundy shore, near Yarmouth, a number of boats were badly damaged and the wreckage of traps was washed up along the shore in winrows. A conservative estimate puts the average loss per boat at from eighty to one hundred traps—a heavy loss to the fishermen, who at the best of times do not make much more than a bare living. Some of these fishermen had only just got their traps down for the spring fishing, and had all their work to do over again. At the present price of laths these traps cost over a dollar each to make, not taking the time required into consideration.

During the month Thomas Smith, lobster fishing from the Yarmouth Bar, met with a very painful accident. He was out in his boat attending his pots, when in some way he got one of his fingers caught in the hoisting gear, which is driven by a small gasoline engine, with the result that the finger was completely torn out. Charles Fevens, also at the Bar, a few days previous to that had one of his arms so badly fractured in a similar gear that it is doubtful if he will ever regain the use of it.

The trap men are preparing for the annual run of mackerel. The first mackerel taken in Nova Scotia waters is invariably taken on the shores of Yarmouth county, generally about Sandford, anywhere from May 7th to the 15th. A local steamer went to Weymouth a few days ago for a quantity of trap rocks, which have been landed as near as possible to where they will be used. It is to be hoped the traps will have better luck this year than last. Last season opened fairly well, but a heavy gale in June destroyed the traps and they were not rebuilt, hence the great schools of mackerel which hung on this shore until long in the winter were missed.

The month's exports have been as follows:

Live lobsters, crates	4,660
Boneless cod, boxes	1,124
Boneless fish, boxes	1,818
Fresh salmon, cases	33
Clams, barrels	471
Pickled fish, cases	91
Fresh fish, cases	12
Eels, barrels	4
Fish waste, barrels	226
Dry fish, drums	732
Fresh halibut, cases	35
Fresh cod, cases	5
Canned lobsters, cases	716
Fresh haddock, cases	9
Periwinkles, barrels	16
Dry pollock, cases	28
Herring, barrels	129
Mackerel, barrels	67
Fish oil, barrels	5

Smelts, boxes	49
To Hamburg:	
Canned lobsters, cases	364
To Havana:	
Dry fish, drums	72
To London:	
Canned lobsters, cases	188

Some good fares have been landed during the month by the local schooners They have been in several times a week with fares running from 500 pounds to 5,000 pounds of halibut and from two to three times that amount of cod and shack. The Digby county vessels, Curlew and Myrtle L., have also sold several trips here.

Just about this time of year Yarmouth county prepares to reap another harvest gathered from the fisheries, but this is from the lakes, rivers and streams of the county. This county is all cut up with waterways and many of them are excellent trout streams. The season opens on April 1, and already many parties have been in for fish and all have had more or less success. It is during May and June, though, that this fishing is at its height. Generally in April the water is too high and the weather is not suitable for camping out. From now on there will be dozens of parties come here from the United States and every available guide has already been secured. The inland fisheries of Yarmouth county is a very important branch of our fishery and thousands of dollars are left here on account of it.

SHELBURNE, N. S.

(From Our Special Correspondent).

The heavy easterly gales of the last week in April played havoc with the gear belonging to the lobstermen of Shelburne county. From Barrington, Clark's Harbor, Hawk Point, Roseway and other points the fishermen report heavy losses, which will be hard to catch up on during the balance of the open season.

The steamer "Atlantic," of the Neville Canneries, is maintaining a service between Shelburne and U. S. She sailed on her first trip with 100 crates of live lobsters for Rockland, Me. Steamer "Mouton," of the same firm, will ply between Halifax and Yarmouth for the remainder of the season.

DIGBY, N. S.

(From Our Special Correspondent).

Digby, April 30.—The Digby haddocking fleet of large vessels are now in their summer rig and are fitted out for halibuting and shacking. The high line of the haddocking fleet was the schooner Dorothy G. Snow, owned by Capt. Joseph Snow and commanded by Capt. Ansel Snow. She went into commission Sept. 19th, 1913, and landed her last fare April 14, 1914, during which time she stocked $22,011.73. Her owner says this beats all records out of the port of Digby, and he thinks it is the best in Nova Scotia. This vessel was also the first to get away in her summer rig, but was run into in St. John last week, where she had gone for bait, by an American coasting schooner, carrying away her bowsprit, mainboom, damaging rails, etc. She was repaired at that port and sailed to-day for the fishing grounds. Schooner Dorothy M. Smart, Capt. William Snow, got away from Digby yesterday, and the schooner Albert J. Lutz, Capt. John Apt, is in the Raquette in her usual yacht-like trim ready for a halibut trip.

Schooner Loran B. Snow, Capt. Arthur Casey, is hauled up for the present at Capt. Joseph E. Snow's wharf, where she will be thoroughly overhauled, painted, etc.

The haddocking season was a great success among the Digby fleet; big fares and high prices continued until Easter, after which the prices, as usual, took a sudden drop and there was but little demand for the last three fares sold here during the first week after Lent.

The American schooners Oliver Killam and Grace Darling, which were purchased at Yarmouth by Capt. John W. Snow, have both arrived at Digby and are fitting out for fresh fishing.

Schooners Myrtle L., Capt. Longmire, and Wilfred L. Snow, Capt. Slocum, have already commenced the summer fishing.

A large fleet of gasoline boats are being painted and made ready to go into commission.

Everything points to busy times among the fish firms at this port for the remainder of 1914.

The wrecked American fishing schooner Theodore Roosevelt, at Centreville, has been raised sufficiently to receive a new keel and other necessary repairs. The raising of the vessel was in charge of Mr. W. A. Chute, Bear River. The repairs will be made by Mr. Deveau, of Meteghan, who has with him a number of excellent workmen.

Mr. David Sproule has shipped his motor boat, Tourist, to Long Point, Inverness county, Cape Breton, where she will be used in the lobster fishery.

Steamer Percy Cann was at Weymouth last week to get a number of trap rocks for the Checoggin and Port Maitland fishing traps.

Capt. Manning Trask's fishing schooner Harry L. arrived at Little River last Thursday from Meteghan, where the owner had installed a 24 h. p. Lathrop gasolene motor, having sold the vessel's former motor to Mr. S. D. Munroe, of Digby. The latter will be installed in a pleasure boat to be used in the tourist business.

The old American schooner Effie M. Morrissey, which sailed out of Digby for many years, and which was purchased last month by Capt. Bartlett, of Newfoundland, is now at New London, Connecticut, loading for her new home port.

The following are the fish receipts at Digby for the month of April, as reported by the local wholesale fish firms: Maritime Fish Corporation, 233,351 lbs. of haddock, 398,009 lbs. of cod, 8,487 lbs of cusk, 2,009 lbs. of halibut, 800 lbs. of hake; Joseph E. Snow, 249,100 lbs. of haddock, 36,200 lbs. of cod, 9,200 lbs. of shack, 12,750 lbs. of cusk, 1,265 lbs. of halibut; Nova Scotia Fish Co., 79,600 lbs. of haddock, 4,000 lbs. of shack, 4,000 lbs. of cusk, 1,200 lbs. of mixed fish, 12,300 lbs. of cod, 1,141 lbs. of halibut; D. Sproule & Co., 19,400 lbs. of haddock, 6,662 lbs. of mixed fish.

BAIT AND ICE REPORTS

Plenty of herring is reported in the nets at Amherst Harbor, Magdalen Islands, on May 1st. Plenty of herring at Grand Entry and some at House Harbor. Pleasant Bay is reported still frozen from Sandy Hook to Havre aux Basques. The Bay should be clear within the next day or two. The fleet, at present waiting in Canso and Port Hawkesbury, are expected at the Islands for their baiting at any time now.

THE PACIFIC FISHERIES

BRITISH COLUMBIA GOVERNMENT TO INVESTIGATE MOVEMENTS AND DATA OF SALMON.

In order to supply fishermen in advance as to the estimated size of the "runs" each year and also to collect data about the life and habits of the salmon, the B. C. Government is sending out seven men. These men will investigate the waters of the Fraser, Nass and Skeena Rivers, and also Rivers Inlet. They will obtain samples of the fry and report upon the shoals where the fish lie before entering the fresh water.

Provincial Constable Markland will proceed to Quesnal Lake the head of the Fraser River, and over 250 miles from the sea. To permit the salmon entering this lake, ladders were constructed a few years ago.

In a few weeks time the fry will be sufficiently old enough to start on their journey to the sea, where they go on their four years' migration. At the end of this period, the fish now grown, return from their unknown haunts and make for the river and lake of their birth.

Up to the present such observations have been somewhat spasmodic, but by having these yearly, it is anticipated that the information collected will be of great benefit to those interested in the trade.

Northern Canners Busy on 1914 Preparations.

Last year the Northern canners had a very disappointing season, and those who had no canneries on the Fraser to help strike an average, lost money. The mysterious four years' "run" does not seem to apply to any river but the Fraser, and also last year climatic conditions were against the salmon.

The Skeena River is anticipating a pack of 200,000 cases against 164,000 of 1913. The Naas for 60,000, Rivers Inlet for 115,000, and outlying districts for 300,000 cases This indicates that the Northern canners expect at least an average year.

There are two matters worthy of notice this year. One is the fact that less Chinese help is being shipped, an indication that the Indians and whites are being given a better show. The other is that the sanitary can is now being adopted almost universally. The cans themselves can be manufactured at the cannery, but the tops have to be shipped from the factory of the American Sanitary Can. Co. at Vancouver. It is expected that next year this company will establish a Northern plan to facilitate shipping.

On the Fraser there is nothing like the stir and bustle of last year. Out of fourteen canneries only about six are to operate this year. Last year the Fraser packed more than half of the total of the B. C. catch, but 1913 was a "big year." As on the Northern canneries, the sanitary cans are now used almost entirely. This does away wth a very large amount of Chinese labour.

General Notes.

Lent is over and to a certain extent, the season has been somewhat of a disappointment to fish handlers on the Pacific slope. Both in British Columbia and also in the neighbouring U. S. States dealers say that they have never known such a quiet Lent in the whole history of the industry. As a rule this "fish" season is looked upon as being to the fish dealers what Christmas week is to the poultry handlers. Whether we out here are forgetting that we were taught that Lent is a time set aside for the eating of fish, or else are too busy chasing the elusive dollar to remember the season; at all events, we have not been eating the fish we ought to have for the past forty days.

The writer was in Seattle and the Sound cities the past few days, and there preparations for the coming season are in full swing. The bulk of the Cod Fishing vessels have all sailed for the Behring Sea, and more than ever has gone this year. There has been quite a discussion of late as to whether the Pacific Cod is really the real article. Up in the Northern waters of Siberia and the Behring Sea, there seems to be no doubt but what the fish is the real cod; but south of these waters, it is generally accepted that what passes for cod, is nothing else but ling. To this deduction must be added the fact that all Pacific fish differ most materially from their Atlantic cousins. But undoubtedly the Atlantic cod and the Pacific are two very different fish.

Anacortes, Wash., is coming to be known as the Pacific Codfish centre. Two large companies send their schooners north and on their return the familiar flakes are seen all covered with fish. A great part of this fish is sent to the Atlantic Coast, where it is prepared for market. Still the bulk is put into "bricks" and "boneless" at Anacortes, and finds a ready market all over the U. S. To show a peculiarity in the human species it is said that a great part of the cod shipped from Puget Sound to the Atlantic points, returns as Atlantic cod, and is appreciated by those who prefer Atlantic fish to the Pacific.

We notice that the CANADIAN FISHERMAN'S mission is "clean fish." This is a most worthy slogan to carry. One notices that the Pacific fishermen are far more careful in the handling of their catches than the Atlantic. Perhaps since the writer was on the Atlantic coast conditions have changed, and methods are better now. But it is always the case that new cities and settlements take advantage of mistakes that crop up in the older ones, and so guard against them. This applies in particular to sanitation, and general care of the premises. "Forking" is also less prealent, and the least done of this the better both for the fish and for the fisherman.

There seems to be no settled plans as to the future of the British Columbia Fisheries Limited. Rumours are around that suggest all sorts of amalgamations. During the latter part of March a public cold storage company in Vancouver advertised the auction of a quantity of frozen halibut packed by the above com-

pany. The speculation as to the fate of this fish was rather high. But just before the hour advertised for the sale, money was cabled from England paying the storage accumulated. It is said that this money was sent by a man who is busy re-organising another company with whom it is proposed to amalgamate the B. C. Fisheries, Limited.

The Northern city of Prince Rupert has had all sorts of rejoicings during the first weeks of April. The first through train from Winnipeg arrived over the newly completed Grand Trunk Pacific Railway. This city can now enter into its anticipated glory, and we hope to see a good part of the promised benefits accomplished. A new railway into a city is always a matter of celebration, but where a city is built in preparation for a great trans-continental line, the completion of this line is a matter of rejoicings for all concerned. We shall all watch Prince Rupert now, and it is up to her to carry through at least a part of what she has promised us.

Vancouver is a city of surprises regarding its weather. We know that in the East, the citizens of Vancouver are pictured as living in oil-clothes and umbrellas. But we would like to show our Eastern friends a picture taken during the middle of March. It shows a number of children in the water on one of the beaches that the city prides itself upon The sands are also covered with other children with the spade and bucket. Then—two days latre we had a snowstorm. . . . But we back our climate against that of any other part of the sea coast of Canada.

SALMON.

With the warm weather experienced of late, the snow on the mountains has started to fill the rivers. This is what the Salmon-Springs wait for. They do not like to enter the rivers when they are clear. Spring Salmon are now fairly plentiful on the Fraser and other rivers, but the supply is not anywhere near the demand, so prices are accordingly strong.

HALIBUT.

There is still a quantity of frozen stock on hand, and it is being gradually cleaned out, owing to the supply of the fresh stock being kept low. But we fail to see why we should pay 10c. per lb. in this city for the fresh fish, when the retailer gets it at 4c. to 5c. But as the meat vendors are also the fish retailers, and as they say that there is no money in meat these days, we suppose we ought not to grudge them a small profit like this.

Frozen stocks are pretty clean on Puget Sound, and packers are shipping all the fresh goods they can get hold of. We do not know why it is, but still it is a fact that our American cousins on the Sound have larger markets than we have. We have the advantages of lesser hauls from the fishing banks, and also no duty to contend with, and the same freight rates. So we ought to get some of the business that we fail to now.

SMOKED SALMON—A GOOD LINE

Prince Rupert, B. C., April 30—A high endorsation of his prepared fish food products was received to-day by William Shrubshall from William A. Found, superintendent of Dominion Fisheries at Ottawa. Recently Mr. Shrubshall sent a consignment of smoked flaked spring salmon, sock-eye, cohoe and hump-back to Herbert S. Clement, member for the Comox-Atlin constituency, for distribution among the experts of the Fisheries Department. In commenting upon the new product, Superintendent Found said: "Each article is excellent, and I congratulate you on putting up such a product. It is not only tasty, but is prepared in an attractive way. There will, I am confident, soon be a large demand for it if it is placed on the market, as people who once use it will be sure to wish for more." Mr. Shrubshall, who is a pioneer in the fishery business here, won leading honors for his display of cured fish which was contained in the British Columbia exhibit last year at the Toronto exhibition. The new product which is to be marketed is a great improvement on the mild cured salmon, and after two years of experiments, he is confident that he can output smoked salmon locally instead of at present shipping mild cured salmon to Germany and elsewhere for the final process. Heretofore the difficulty has been in perfecting a treatment that would keep firm and marketable the finished product even for a few weeks, but Mr. Shrubshall's new process, he claims, now overcomes all difficulty. The new product is to be put up on a large scale here as soon as arrangements are completed for a water-front site.

CANNED SALMON.

Sockeyes,	Talls	$6.50	per case
do.	Flats	7.00	do.
do.	Half flats	8.25	do.
Cohoes,	Talls	4.25	do.
do.	Halves	6.50	do.
Pinks,	Talls	2.75	do.
do.	Halves	4.00	do.

Conditions are about the same as reported. All Sockeye are holding firm, with buying for summer-trade medium.

Cohoes in all sizes in fair supply, but no carry overs are anticipated.

As regards 1914 pack of Sockeyes, sales to English buyers have been made up to 85,000 cases at $9.60 halves flats, $8.50 flats, and $8.00 talls. These prices are in considerable advance of those of 1913, and are looked upon as not being the lowest to be obtained. The Fraser River pack will of course be nothing like that of 1913, but the Northern river packs ought to show up better than last year.

With the above sales of Sockeyes at figures stated, it will mean that the canners will pay the fishermen considerable in advance of 1913. Last year the fish sold for 20c. and 25c. each, and in some cases less. 30c. is looked upon as being the least to be offered this year.

WHOLESALE FISH PRICES, VANCOUVER MARKET.

(Quoted by London Fish Co.)

Smoked Fish.

	per lb.
Finnan Haddie, Eastern 15 and 30s boxes	.09
Fillets, Eastern, 15s.	.10
Eastern Bloaters	.07
Local, Bloaters	.06
Kippers	.06
Salmon	.14
Halibut	.11

Cod	.09
Kippered Salmon	.12
Kippered Halibut	.12
Kippered Black Cod	.12

Frozen Fish.

	Per lb.
Salmon Steelheads, dressed	.09½
Salmon Cohoes, dressed	.07
Salmon, Cohoes, round	.06
Qualla, dressed	.05
Cod	.05
Halibut, Chicken and Medium	.06
Smelts, local	.05
Oolachans	.05
Soles	.05
Flounders	.03
Perch	.05
Herring, local	.03
Black Cod, Alaska	.08
Mackerel, Eastern Shore	.12
Shad Roe, per pair	.20
Whiting	.03

Fresh Fish.

	Per lb.
Salmon, Spring	.12
Halibut	.05
Cod	3-5
Smelts	.08
Herring, Local	.03
Soles	.05
Whiting	.06
Oolachans	.06
Skate	.03
Perch	.04
Rock Cod	.03
Red Cod	.03
Sea Bass	.04
Black Cod, Alaska	.08
Shad, Columbia River	.08
Sturgeon (round)	.10
Sturgeon (dressed heads off)	.16

Pickled Fish

Salmon (sides) barrel, 200 lbs. per lb.	.10
Salmoon, Bellies per lb.	.12
Alaska Black Cod per lb.	.08
Eastern Dried Hake per drum	7.50
Eastern Salt Cod (whole fish) per lb.	8-11
Western Salt Cod per lb.	.07
Oolachans per lb.	.10
Mackerel, Eastern Special per bbl.	27.00
Mackerel, Eastern, 190 count per bbl.	22.00
Mackerel, Irish, 340 count per bbl.	20.00
Herring, Large Eastern per ½ bbl.	5.50
Herring, Holland Mixers 10 lbs. kit	.90
Herring, Holland Milchers 10 lb. kit	1.00
Herring, Local per lb.	.07

Prepared Fish.

	Per lb.
Boneless Cod, Acadia, 2-lb. boxes	.14
Boneless Cod, Acadia, Strips	.13½
Boneless Cod, Bluenose, 1-lb. & 2-lb. bricks	.09½
Boneless Cod, Pilot, 1-lb. and 2-lb. bricks	.08
Boneless Cod, Pacific	.09
Nova Scotia Turkey, 2-lb. bricks	.07½

Shell Fish.

Crescent Point Oysters	per case	6.00
Crescent Point Oysters	per do.	.24
Eastern Oysters, Bulk	per gal.	3.00
Eastern Oysters, Seal shipt	per gal.	3.00
Eastern Oysters, Seal shipt	per quart	.75
Olympia Oysters	per gal.	3.25
Deep Sea Crabs	per do.	1.00
Shrimps	per lb.	8-12c.
Prawns	per lb.	15-25
Clams	per lb.	.02
Clams shelled	per gal.	1.25

PACIFIC HALIBUT

May 1st Arrivals.

Schooner "Pescawha," 50,000 lbs. halibut for 14 days fishing.

S. S. "Celestial Empire," 10,000 lbs. halibut for 14 days' fishing.

S. S. "Capilano," with 55,000 lbs. halibut, ex. schooners "Carlotta G. Cox" and "Zaporra."

FRASER RIVER REPORTS

May 1st.

Salmon.—The river is pretty high now, but still there are some average catches of "Springs." Buyers for the different fishing firms are busy securing the fish for their principles. A few "Bluebacks" have been on the market and found ready sales with the retailers.

Sturgeon—This spring has seen very large catches of this fish. The large ones are few and far between, but those about 10 lbs. weight seem to be plentiful. The question of allowing these little fish to be landed is open to debate. But as they are all caught with the salmon nets, there seems to be no way of avoiding it. For some reason the Oriental population consume far more of the Sturgeon than any other class of people. Those who have caught the large fish which contain roe, put the same through the first process, and are getting from $1.50 to $2.00 in New York for the "caviar."

Canneries.—Those to operate the coming year are now getting in line. Supplies are being shipped, crews arranged for, licenses placed, etc.

THE HALIBUT FLEET

April 27th—The arrivals to-day include the following vessels, together with their catches:

"Wallace No. 1," 25,000 lbs.

"Princess May" (with fish ex. Borealis," 25,000 lbs.

The "Celectial Empire," with 30,000 lbs., and the "Pescawa," with 15,000 lbs., have been reported on the Banks on the 22nd.

The S. S. "Kingfisher," Capt. Churchill, has gone into commission again after thorough overhauling. The "Knickbocker," which arrived at Seattle some time ago from the Atlantic, is due here this week to the New England Fish Company. She will fit out here and make this her home port this summer. Her sister ship, the "Bay State," is expected from the Atlantic via the Panama Canal this summer.

NEW B. C. FISHING COMPANY

British Columbia Fishing and Packing Company, Limited, of Vancouver, B. C. Capital $5,000,000. Incorporators—J. S. Lovell, R. Cowans, W. Bain, C. D. Magee and J. Ellis, all of Toronto.

ANOTHER ASSOCIATION

The Independent Halibut Fishermen of Seattle, representing an investment of $3,000,000, have approached the Port Commission of Seattle, Wash., in reference to securing accommodation on the new municipal docks. It is held that with this accommodation, that cold storage plants can be ubilt, which the fishermen say is most vital to their interests. In 1912 out of 34,052,000 lbs. of halibut landed at Seattle, members of the independent organization contributed 21,000,000. The seventy-eight members spend in Seattle on the average $20,000 per month, and thus hold that they are entitled to some consideration from the city.

With the cold storage facilities they maintain that they will be able to land their fish and store the same during a glut of fish. It happens often that the fish has either to be sold for what it will fetch or else "dumped." This means losses to those operating. As an example, it was pointed out that 2½c. per pound was a common price these past few months, when at least 3c. is required to clear expenses, not taking any prifit into consideration.

The Port Commission has the matter under their notice and may build a temporary cold storage with the idea of a large central fish dock later on.

SIGNS OF SPRING.

Up and down the Pacific coasts one sees the sign of Spring wherever one looks We are interested in the fishing industry, so glance in the stores along the water fronts. There you will see all the latest in hooks, lines, oil-clothing, and everything that a vessel or crew of a fishing expedition may want.

The canneries are all getting their supplies shipped up, nets in shape, and permanent crews signed on. The Alaska canners book up all the steamers sailing to that coast, and daily one sees a crowd sailing, not to return until the Fall.

Boats are being overhauled, "kickers" thoroughly cleaned, gear renewed where necessary, and licenses taken out. Once that these are obtained the holders throng the offices of the packers, and in many cases sign up for the coming year. They are then able to get advances in either money or kind for anything that they may need for their summer's work.

A walk along the water front, especially where fishing vessels are wont to tie up, will see a crowd of men on every wharf. The oft-debated subject, "Whether anticipation is better than realisation" is proved in favour of the former in the fishing industry. The preparations for the summer's catch are matters of careful thought on the part of the skipper down to the boy. There seems to be more excitement displayed in the fitting out of a "voyage" than in the arrival in the Fall with a full load. It is this uncertainty that has the lure that is found in the trade that is as old as the earth is almost.

In the offices the staff is working overtime for these few weeks. At last all is cleared up, vessels and crews dispatched, and then the staff settle down to the ordinary routine. The Spring has come.

COLD STORAGE PLANT FOR NADEN HARBOR.

The Wallace Fisheries are putting in a small cold storage and ice plant at their Naden Harbor cannery. The plant will be used for chilling the mild-cured salmon put up by that firm. The spring salmon have been running big in the waters nearby the past few years, and a good pack of mild-cured salmon is always assuerd. The company will make a specialty of this kind of packing at the Naden harbor cannery.

NORTHERN FISHING RECORD.

Despite the fact that for 1913 the salmon catch in Northern waters was one of the lightest in years, the total value of the catch of the Prince Rupert fisheries was over a million and a quarter dollars. The quantities and value of the different varieties are as follows:

	Cwts.	Valued.
Salmon	161,300	$810,465
Halibut	75,768	378,900
Herring	93,390	93,840
Cod	1,055	3,225
Mixed fish		885
Total		$1,287,315

HALIFAX FISH PRICES.

(Halifax Herald).

Fish—Ex-Vessel.

	Per qtl.
Small dry cod	6.50
Medium dry cod	6.50 @ 6.75
Large shore cod	6.75 @ 7.00
Bank cod	7.00
Haddock, dry, slack salted	4.25 @ 4.50
Do. heavy salted	4.25
Cod oil (ex-vessel), per gal	.30
Pollock	4.25 @ 4.50
Hake	4.00 @ 4.25
Mackerel, large, per barrell	10.50
Do. medium, per barrel	10.00
Fat herring, barrels	4.50
Do. half barrels	2.50

BONELESS CODFISH

(Maritime Fish Corporation, Ltd.)

Halifax, b lb. boxes, crates, 12 to crate (per crate)	6.00
Halifax, 1 lb. boxes, crates, 24 to crate (per crate)	3.60
Halifax Shredded, cases, 24 to case (per case)	1.80
Acadia, 2 lb. boxes, crates, 24 to crate (per per crate)	6.00
Acadia, 2 lb. boxes, crates, 12 to crate (per crate)	3.00
Acadia Tablets, 1 lb. package, cases, 20 to case (per case)	2.20
Acadia English Strips, 30 lbs., cases (per case)	3.60
Cod Bits, 3 lb. boxes, crates, 12 to crate (per lb.)	.08
Cod Bits (bulk), 25 lbs., cases (per lb.)	.07
Skinless Fish, 100 lbs., cases (per lb.)	.07½
Skinless Fish, 50 lbs., cases (per lb.)	.07½
Bluenose Steak (assorted), 1 and 2 lbs., cases, 40 lbs. to case (per lb.)	.08½
Bluenose Steak (assorted) 1 and 2 lbs., cases 20 lbs. to case (per lb.)	.08½
Pilot Blocks (assorted), 1 and 2 lbs., cases, 20 lbs. to case (per lb.)	.07½
Pilot Loose (assorted), 25 lbs., cases (per lb.)	.07

Things to worry about. Every time a carp breathes it moves 4,386 bones and muscles.—Cincinnati Enquirer.

THAT FISHERIES TREATY

By A. E. HOWARD.

Easter has passed, and so the ultimate extension offered the U. S. Senate for ratification of "the system of uniform and common international regulations for the protection and preservation of the food fishes in international boundary waters of Canada and the United States." Apparently between gratification as to Panama tolls, anxiety as to railroad development, pinched finances, and a host of other things, Ottawa has forgotten the fish.

It was in the summer of 1908, if I recall correctly, that following on "the convention concluded by and between His Majesty Edward the Seventh, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the seas, King and Emperor of India, and the United States of America," two gentlemen, yclept International Fishery Commissioners, and named respectively Edward Ernest Prince (now Dominion Fisheries Commissioner) and David Starr Jordan (President of Leland-Stanford University, Cal.), started along the water way of the international boundary from the extreme east and proceeded by leisurely stages to the extreme west, in order to mark, learn and inwardly digest all that might appertain to the better protection and preservation of food fishes whose habitat was in and around such waters as above mentioned. Those observations resulted, long before New Westminster, B. C., hove on the horizon, in certain opinions being formed, which, although in the main shared by both Commissioners, became sharply divergent when considered in the light of application to the commercial fisheries at large. However, by dint of mutual patience and forbearance, coupled with a steady outlook on the main idea to be arrived at, certain regulations and recommendations were embodied in a "return" made the following Spring at Washington, D. C., and duly submitted to the consideration of the high contracting parties. That printed "return," now before me, endorsed by the Parliament of Canada, has never yet been able to surmount the solid barrier of "special interests" in the U. S. Senate. It is admittedly an altruistic measure and on general principles altruism, which means giving away a piece of the pork, is not practical politics.

Now in that the chief "difficulty" regarding the enactment into law of this enormously important conservation measure concerns the Pacific Coast it may be well to consider in detail Regulations 62 to 66 inclusive, which "shall apply to the Strait of San Juan de Fuca, those parts of Washington Sound, the Gulf of Georgia, and Puget Sound, lying between the parallells of 48 deg. 10 min. and 49 deg. 20 min. north latitude." Just as the "railway belt" and the Panama Zone" are jurisdictions apart from the territory on either hand, so these boundary waters are apparently to be a law unto themselves not affected by Dominion, Federal, State or Provincial regulations as to close season, prohibited fishing, methods of capture and so forth. Right here I want to say that, although the new regulations are considerably diffuse, they are certainly not diffuse enough to embrace the existing body of statute law and local ordinances relating to the Commercial Fisheries. Especially, we are not told why certain restrictions are made for certain waters when they are obviously applicable to either part or the whole of the Fisheries along the international boundary.

But to return. Article 62 prohibits fishing for salmon or steel heads from August 25 to September 15 in each year, both days inclusive. There is a promise that cohoes or silver salmon may be fished from September 1 to September 15 westward of a line drawn from Gonzales Point to the shore of the State of Washinton (Straits of San Juan de Fuca), II.

Article 63 sets up a week-end close season from Saturday 6 a. m. to the following Monday 6 a. m. with the promise that to the westward of the line spoken of above the close season shall begin 12 hours earlier and end 12 hours later.

Article 64 relates to the construction of pound nets (specially defined as "traps," on the Pacific) and enacts that they must permit the free passage of fish during the weekly close season. It is added that the addition to pound nets of "a jigger" (specifically defined as a recurved hook of netting) is verboten.

Article 65 limits pound nets to a length of 2500 feet with an end passageway of at least 600 feet between one pound net and the next in a linear series, such distance being measured in continuation of the line of direction of the leader of such net, and a lateral passageway of at least 2400 feet between one pound net and the next. Mesh in pound nets after January 1st, 1911, to be 4 inches in extension (stretched) in the leader and not less than 3 inches in other parts of the net.

Article 66 forbids working a purse net (or purse seine) within three miles of the mouth of any river and forbids any seine to be worked within one mile of the mouth of any river in these treaty waters. It also disallows the use of gill nets more than 900 feet in length and of a greater depth than 60 meshes.

Now, what are the difficulties regarding the enactment into law of these five regulations for the conservation of the salmon of the Pacific in boundary waters? I put aside certain obvious revision of the regulations in the matter of co-ordination with existing laws, for that is a matter which can be adjusted without friction. Are the other difficulties insurmountable? What are they? First and foremost, is the whole "trap" proposition. If Canada would wipe out all restrictions on "trap" fishing then "the interests" in the Senate would report the treaty favorably. Personally, I do not believe, after careful, consistent, observation that "traps" under proper regulation are the fearful engines of destruction portrayed by some cannerymen on our side the line. They catch fish in bulk during the run and that is necessitated for successful canning operations. They may, or may not, catch "Canadian" fish homing for the Fraser—that is as you look at it.

At all events, these regulations permit "traps" (presumably where they are already licensed and not otherwise) with certain restrictions. One is that "a jigger" must not be used. I think the Commissioners meant by this "a net brailer," although how close a trap is to be "fished" I know not. Another restriction is as to "clearances" between the traps, surely not an unduly severe one. Another is that the aprons must be "up" to give free passage to the fish over the week-end, advancing the date according to the progress of the incoming school. Another gives 22 clear days for the spawning fish to reach spawning grounds and for hatching material to be obtainable;

(presumably this close season is to supersede all others now in force). Still another limits the use of both purse seines, ordinary seines, and gill nets.

It seems to my poor intelligence that any candid person with a knowledge of local conditions must admit that the Americans now using "traps" have received most kindly usage from their Canadian brethren, who are not allowed to catch a salmon at all "except on the wing." Surely in the interests of the survival of the salmon they do not wish to duplicate such a fiasco as threatens South East Alaska. This treaty really despoils them of nothing and can but be productive of lasting benefit to all concerned. I grant that the regulations need considerable elucidation on the lines indicated and possibly the actual "fishing" of the traps might be left as at present. But given these things, surely another "message from Woodrow" is in order. "Free fish" means that Americans operating traps can in the absence of drastic export regulations cause canners on the Fraser to pay dear for raw material. There is such a thing as retaliation possible. A strict construction of international law in place of international comity would probably mean that the halibut fishery now prosecuted out at Seattle and Tacoma must be confined entirely to Alaskan waters.

THE LAKE FISHERIES

(Frm Our Special Correspondent).

Lake Erie is the only place where there has been any extensive fishing operations so far this spring. The tugs there get out early, as any stock of whatever kind brings big prices at the start of the season, particularly when the quantity is not large. Moreover, they are not hampered in having to wait for the regular steamers to pick up their catch, as is the case at so many points on the Lakes. Immediately their catch is ashore, they are in a position to ship by express to the best market in the United States or Canada. Operations have been going on for a couple of weeks now and most of the tug men have found it profitable at the prices being paid. The catch has been pretty good for the time of year.

The ice has now moved out from practically all the points where fishermen operate, with the possible exception of a few points on the Inner Channel of Lake Huron and Georgian Bay. The steamers that pick up fish will commence this week, and as the fishermen have had a long winter to make preparations, they are all ready to commence; some of them, indeed, have already got several gangs of nets set.

The usual scramble for contracts between the big fish companies and the fishermen has taken place, and the only change of note will be slightly increased prices all round. The change in tariff has had something to do with this, but probably the greatest reason was the marked scarcity of trout and waterfish last season and the efforts of the fish companies to bolster up their supply. On the other hand, the competition of sea fish for winter use is getting so pronounced an advantage over the lake fish that the big houses are canny about increasing the prices any great amount. The laid down price on trout is now much higher than practically all the sea salmons.

The past couple of months on the Ontario fish markets has witnessed great price cutting on Western sea fish. Halibut was selling in Toronto at times for prices that would not pay for the production, not to mention such items as transportation, shrinkage, and the cost of handling the goods. Sea salmon was somewhat firmer, but in some cases sold at less than laid down cost, and it is safe to gamble that some of the wholesale houses were given a severe trimming. However, the loss was somewhat divided with the Coast houses, as some ridiculously low prices were quoted f.o.b. the Coast in the latter few weeks of the season in a last effort to clear out the frozen stocks held in storage.

The outstanding feature of the winter's business just past was the gratifying increase in the consumption of fish. Meat prices were extremely high, and the extraordinary cheap prices of fish brought this article of diet forcibly to the notice of the housekeeper. We have enough faith in our products to believe that this temporary use will convert these housekeepers into inveterate consumers.

LAKE FISHING STARTS LATE

According to John Bowman, of Bowman & Son's fish market, Port Arthur, some fishing along the north shore of Lake Superior will not be started until the first of May. The lateness of the start is due to the many bays along the shore in which there is good fishing being frozen over later than Thunder Bay on account of there being no lake traffic to break it up.

He stated that the season promised to be a good one for fishing and he anticipated no change in price from last year, when whitefish were sold for twelve and a half cents a pound, trout brought the same price and herring sold for an average of twenty-five cents a dozen. Although a large number of pike are caught in this vicinity, practically all of them are shipped out, as, in view of the fact that the very best fish can be obtained here at a reasonable price, a lower grade fish such as pike has no market.—Exchange.

WEST INDIAN MARKETS.

(Special to CANADIAN FISHERMAN from Kingston, Jamaica).

During April sales were made of large Newfoundlandfish: Brown, dry, at $35.00 to $37.00, c.i.f, according to quality; Halifax 'Bank,' at $32.00 to $33.00, f.o.b. Halifax; Newfoundland herrings, large, at $5.00, c.i.f.; Halifax, large, at $4.25 f.o.b.

Owing to the rather large consignments which reached this market during the last few weeks, in addition to arrivals against firm orders, our market at present is rather overstocked. Importers are selling at cost and in some cases below cost.

The lake and river fishermen are preparing for the season's fishing. The ice has delayed preparations later than usual. In the Montreal market the local fishermen have been bringing in quite a lot of pike, perch, catfish, river whitefish, and suckers ever since the ice moved out.

NEW LOBSTER FISHERY REGULATIONS

By an Order- in-Council, dated March 25th, 1914, the Lobster Fishery Regulations established by the Order-in-Council of the 30th September, 1910, together with all amendments thereto, are hereby rescinded and the following substituted in lieu thereof:

Lobster Fishery

(See also Fisheries Act, Sections 35 to 42 A, inclusive, and 76 to 82, inclusive).

1. "No one shall fish for, catch or kill lobsters, from the 16th day of June in each year to the 14th day of November following, both days inclusive, on and along that portion of the coast or the waters thereof, of the Province of New Brunswick, embraced and included within the counties of Charlotte and St. John, nor shall any one within the above described limits, fish for, catch or kill at any time any lobster or lobsters, the carapace of which measures less than 4¾ inches in length.

2. "No one shall fish for, catch or kill lobsters, from the 30th day of June in each year, to the 14th day of January following, both days inclusive, on and along that portion of the coast, or waters thereof, of the Provinces of New Brunswick and Nova Scotia, embraced and included within the county of Albert, New Brunswick, and the counties of Kings and Annapolis, Nova Scotia.

3. "No person shall fish for, catch or kill lobsters, from the 16th day of June in each year, to the 5th day of January following, both days inclusive, on and along that portion of the coast, or the waters thereof, of the Province of Nova Scotia, embraced and included within the county of Digby.

4. "No one shall fish for, catch or kill lobsters, from the 31st day of May to the 14th day of December, in each year, both days inclusive, on and along that portion of the coast, or the waters thereof, of the Province of Nova Scotia, embraced and included within the counties of Yarmouth, Shelburne, Queens, Lunenburg, and that portion of the county of Halifax west of a line running S.S.E., astronomic, from St. George's Island, Halifax Harbor, and coinciding with the fairway buoys in the entrance of the said harbor.

The "Dorothy C. Snow," high line winter haddocker of the Digby fleet, has gone shacking. The schooner had the bowsprit knocked out of her, rail carried away and mainboom broken while lying to anchor in St. John harbor waiting for a gaspereaux baiting. A savage sqall caused a three-master to drag her anchors and foul the fishing schooner. The "Snow" was repaired in St. John and left for the grounds on May 2nd.

* * *

The American schooner "Mary P. Goulart" arrived at the Boston fish pier on May 1st with a trip of 149,000 of fresh fish caught on Western Bank. The "Frances P. Mesquita" also came in with a fare of 135,000 pounds caught on Western, Sable Island and Cape Shore grounds.

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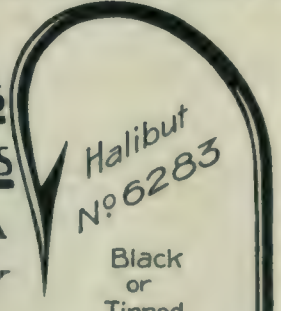

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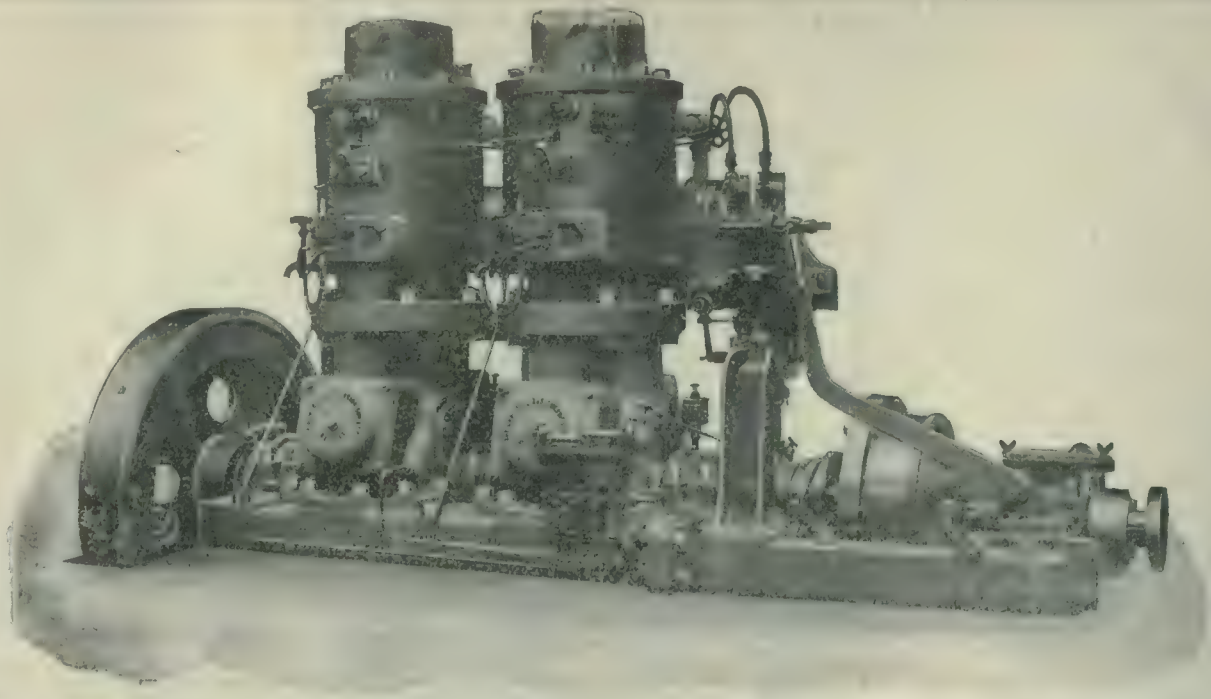

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Department of Marine and Fisheries

FISHERIES:

In addition to the full statistics of the Fisheries which are published yearly in the Annual Report, the Department issues monthly bulletins containing statistics of the sea fisheries and general information in regard thereto. Copies of these will be sent free to any applicant.

The value of the Fisheries of Canada is now about $34,000,000.00 annually.

The demand in the home markets for fresh and mildly cured fish, is expanding very rapidly. The Department pays one-third of the express charges on all shipments of such fish from the Atlantic Coast to points as far west as the eastern boundary of Manitoba, and from the Pacific Coast, as far east as this boundary. Over 1,000 tons more fish reached Montreal for use there and distribution to other points from the Atlantic Coast, under this arrangement last year than the year before. The growth has been equally satisfactory from the Pacific Coast to the Prairie Provinces.

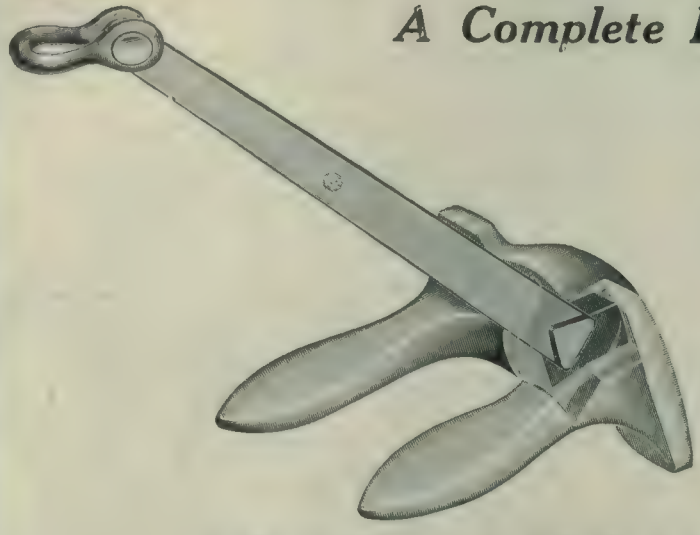
Close Seasons for Fish in Force on December 1st, 1913

Kind of Fish:	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.
Bass (Achigan)	.....	.....	.....	1 April to 15 June.
Maskinonge	.....	.....	.....	15 April to 15 June.
Ouananiche	.....	.....	.....	1 Oct. to 30 Nov.
Oysters	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.
Quahaugs	Oct. 1 to May 10 July 1 to Aug 31.	Oct. 1 to May 10 and July 1 to Aug. 31.	Oct. 1 to May 10 and July 1 to Aug 31.	.....
Pickerel	.....	.....	.....	April 15 to May 15.
Salmon (netting)	Aug 15 to March 1.	Aug. 15 to March 1.	.....	Aug. 1 to April 30.
Salmon (angling)	eAug. 16 to Jan. 31.	Sept 16 to March 31.	.....	Sept. 16 to April 30.
Smelts	fApril 1 to July 1.	fMarch 1 to June 30. June 1 to July 1	fApril 1 to June 30.	.....
Sturgeon	.....	.....	.....	June 1 to July 1.
Speckled Trout	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to April 30
Salmon Trout	.....	.....	.....	Oct. 15 to Dec. 1.
Whitefish	.....	.....	.....	.....

Kind of Fish:	Ontario.	Manitoba.	Saskatchewan.	Alberta & British Columbia.
Bass (Achigan)	a15 April to 15 June.	.....	.....	.....
Maskinonge	15 April to 15 June.	.....	.....	.....
Ouananiche	.....	.....	.....	.....
Oysters	.....	.....	.....	.....
Quahaugs	.....	.....	.....	.....
Pickerel	cApril 15 to May 15.	April 15 to June 20.	dApril 1 to May 15.	dApril 1 to May 15.
Salmon (netting)	.....	.....	.....	.....
Salmon (angling)	.....	.....	.....	.....
Smelts	.....	.....	.....	See regulations.
Sturgeon	.....	gMay 15 to June 15.	gMay 15 to June 15.	gMay 15 to June 15.
Speckled Trout	Sept. 15 to April 30.	.....	.....	.....
Salmon Trout	hNov. 1 to Nov. 30.	.....	.....	.....
Whitefish	hNov. 1 to Nov. 30.	Sept. 15 to Nov. 19.	iSept. 15 to Dec. 15.	iSept 15 to Dec. 15.

a—Except in Lake Erie west of Pt. Pelee and around Pelee Island, where close season is May 25 to July 15.
b—Except on leased areas, where close season is from 1 July to 31 Aug.
c—No close season in St. Clair River and off Lambton County.
d—Except in waters north of or intersected by 54th parallel north lat. between eastern boundary of Saskatchewan, and 109th meridian and in waters intersected by or north of 55th parallel n. lat. west of this meridian to western boundary of Alberta, where there is no close season.
e—Except in Cape Breton Island, where close season is from Sept. 27 to May 31.
f—Bag-net fishing season Dec. 1 to Feb. 15; gill-net fishing season Oct. 15 to Feb. 15. Licenses required for bag-nets or gill-nets.
g—Sturgeon fishing prohibited until Jan. 1, 1916.
h—No close season in Lake Erie.
i—Except in waters specified in (d) where close season is from 1 Oct. to Nov. 30.
For British Columbia See Regulations.

FISHERMEN'S SUPPLIES



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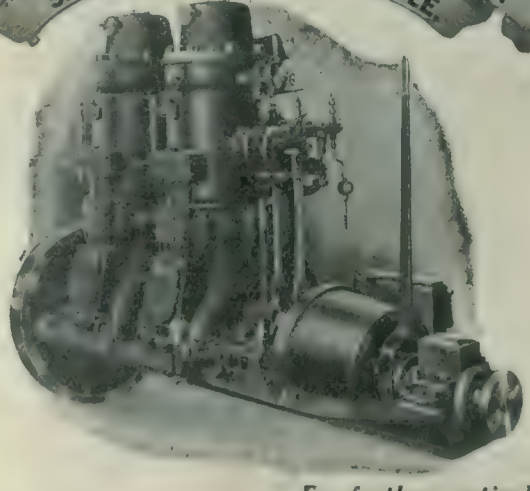

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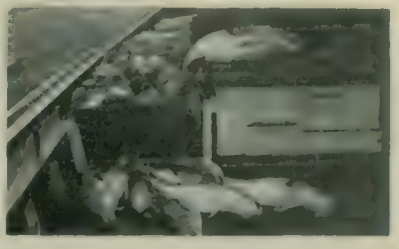

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

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Vol. I. MONTREAL, JUNE, 1914 No. 6

FREE FISH?

Canadian fishermen and dealers in fish will be vitally interested in the following ruling, which was handed down by the U.S. Board of Appraisers upon a shipment of fletched halibut.

It appears that Mr. P. C. Parkhurst, a large fish dealer in Gloucester, Mass., imported from the Canadian Fish & Cold Storage Co., of Prince Rupert, B.C., a carload containing 30,000 pounds of fletched halibut. The shipment was entered at Richford, Vt., and the Customs Collector at Gloucester assessed a duty of ¾c per pound before the fletches could be delivered to the consignee.

Mr. Parkhurst protested the levying of the duty on the ground that fletches were "green" fish and not prepared or manufactured, also that they were neither skinned or boned. He contended that as all codfish not prepared are entered free as green fish, he did not see any reason why salt fletches, which have to be smoked before being marketable, should not also be classed as "green or raw product."

However, his protest was over-ruled by the Appraisers, who declared as follows:—

The merchandise in question consists of large halibut, about 3 ft. long, cleaned, cut into halves, and the backbone taken out, the skin remaining on the back of each fish, it being salted for preservation. It was classified by the collector under the last clause of paragraph 216, Act of 1913, reading, "fish" skinned and boned, three fourths of 1 cent per pound, and it is claimed to be free of duty under paragraph 483, reading, "fresh-water fish, and all other fish not otherwise specially provided for in this section." Of course, if either skinned or boned, it is specially provided for in paragraph 216. The importer claims that while the backbone is removed, it is not boneless fish. After a careful examination of the sample we are convinced that it is substantially boned. The removal of the backbone, in effect, removed with it most, if not all, of the other bones, and we hold that such boneing, even if every individual bone was not removed, would bring the merchandise within the meaning of Congress when it used the expression "fish, boned." Therefore the protest is overruled.

THE NEW PICKLED FISH INSPECTION ACT

The new Act providing for the inspection and branding of pickled fish, which is outlined by Mr. Martell in this issue, passed the House of Commons at Ottawa on May 29th.

The reasons which governed the framing of the Act are for the general betterment of the Canadian trade in pickled fish and to bring the standard in this business up to a level with that of other countries.

As the Hon. J. D. Hazen remarked:

"We believe that, if proper methods are adopted in the curing of our herring caught by our fishermen, they can get quite as good a price for their cured herring, when they once establish its reputation, as the price obtained for the Scotch cured herring. The trouble with the Canadian herring is that they are improperly put up. They are put up in barrels that very often leak when they are carried long distances; the herring become rusty, and there is no guarantee that the barrels will be put up in such a way as to command the confidence of the purchasers. We are providing for

a system of inspection under which any one, who puts up his herring in barrels made according to regulations that will be provided, and who cures them according to regulations, may ask an inspector to inspect them. If the inspector finds the herring are put up in that way, he puts his mark on the barrels guaranteeing that such is the case, and the merchant buying the herring has the guarantee that they are put up in such a way as will make the public buy fish of that class. That, in brief, is the effect of this legislation. It was under legislation of a very similar character that the Scotch fisheries were developed. When the legislation passed many years ago relating to the Scotch herring fishery, the herring there were selling at very low prices, and for the very same reasons that keep down the prices here—there was no guarantee that the fish were put up under proper conditions, no inspection, and in most cases no uniformity in the product. The result of the legislation was to develop the industry and make the herring fishery a profitable one to the people of Scotland. We hope, by a campaign of education, within a proper system of inspection, and with experts instructing the people in the best methods of packing, that our fishermen will develop this industry. And, while the herring is the principal fish, this legislation is not confined to herring, but relates to mackerel and salmon also. As a result of this legislation we hope to build up an industry much larger than that which exists at the present time."

Canadian waters produce fish as good as any in the world, and if we cannot compete with Scotland and Norway in putting up pickled fish, it is our own fault. The market is open for first-class goods, but selling inferior stuff, spoiled through careless packing, does more to kill the trade than anything else and opens the door to our competitors.

PORTABLE MOTORS FOR DORIES ON VESSELS.

The codfishing schooner Fortuna of the Pacific fishing fleet is carrying ten portable motors for her dories. These motors can be attached to the dories in an instant, and detached from them so as not to interfere with the dories when nested.

The Editor of the CANADIAN FISHERMAN realized the usefulness of the portable motor a long time ago and has consistently advocated their use aboard Bank fishermen. With these little engines, the fishermen do away with the hard work of rowing and it will give them a larger berth for fishing operations. With an engine of this nature, fishermen could make sets in weather which might otherwise keep them aboard; they could pick up their gear quicker and get back to the vessel quicker in thick or squally weather. In calms, a half dozen of dories so equipped out ahead of the vessel or lashed alongside, could tow her at quite a respectable clip. At the bait traps, one dory could tow two or three others loaded, while for going ashore and bringing out supplies, they would be invaluable.

NEW BOSTON FISH WHARF NOT POPULAR.

"Let us go down for'ard in the peak and curse the Skipper!" is supposed to be a favorite recreation of fishermen when they have nothing to do, but whether that is the spirit in which the Boston fishermen are "knocking" the new fish dock it is hard to say. The vessel men say that the dock by reason of its sloping sides is a hard place to unload fish at and also that one side of it is unprotected from the prevailing winds and sea. Schooners moored on this side are banged about as they never were at the old T Dock, which, though congested, was well sheltered.

Sailormen, which includes fishermen, are privileged characters in the matter of growling and probably the objections to the new pier may be only a little harmless "scandalizing." When the seamen of a certain ship were fed upon succulent steaks and chops instead of salt junk and pork, they came aft in a body and complained against the change. When asked their reasons, the spokesman exclaimed that they did not like the meat because "there wasn't enough chaw in it!" Maybe, the new fish pier is being condemned because of its up-to-date-ness.

FISHERIES STATISTICS.

April, 1913.

The total value of salt water fish in first hands landed in Canada during the month of April, 1914, amounted to $541,700. This shows a deficit of $247,709 when compared with the total for April of the preceding year. The decrease is entirely attributable to the fact that ice remained late on the coast this year. For instance, on the Gulf Shore last year the catch of spring herring was practically all secured during the month of April, whereas, this year fishermen were unable to set their nets until the end of the month.

Notwithstanding the rough weather throughout the whole month, the landings of haddock were over 100 per cent. greater than those of the same month last year.

The total pack of canned lobsters on the Atlantic coast from the 15th of November to the end of April was 17,158 cases, while the total shipment in shell was 36,614 cwts. During the corresponding period in the preceding year the pack was 24,615 cases, and the shipment in shell 52,528 cwts. It will thus be seen that the results of the lobster fishery so far this season falls much behind those for last year, but this is probably due entirely to the rough weather that prevailed all through the month of April this year; while last year the second half especially of the same month was very favorable and fishing became general all over.

THE PICKLED FISH INSPECTION ACT

By L. H. MARTELL, M.A., B.C.L., Barrister-at-Law.

The Fish Inspection Act, when enacted by the Canadian Parliament, will be the result of a long drawn out agitation of those interested in the great commercial Fish Industry of Canada. For many years the agitation went on, but results were disappointing, and it is indeed, gratifying to know that the proposed Act drafted some two years or more ago by Mr. J. J. Cowie and the writer in collaboration, is at last to be found on the Statute Books of Canada.

I have been informed by one having direct knowledge, it was for the purpose of intelligently fostering the development of the herring industry of Scotland, at the time when the Dutch were reaping a rich harvest from their herring fishery, and the Scotch were likely to lose theirs entirely, owing to the lack of intelligent care in curing, that the Fishery Board for Scotland was created. The central idea of the Board was to force an entrance for Scotch herring into the great European markets, by inducing curers in Scotland to provide a carefully packed barrel of herring of good quality, for export.

The plan adopted, my informant (Mr. J. J. Cowie of the Department of Marine and Fisheries), told me while I was an official of the Fisheries Department at Ottawa, was that of paying a bounty (from government funds, as it was looked upon as a national question) to curers on every barrel of herring cured up to a standard laid down by the Board, and of instituting a system of inspection by practical officials, who stamped each barrel which was found up to the necessary standard, with what is still known as the "Crown Brand."

It is stated the plan was so successful and satisfactory, that in the course of eight or ten years, Scotch herring threatened for the first time to take the foremost place in the markets of Europe, and within a decade later, they actually did outdo the Dutch, both as regards the quantity cured and sent to the Continental market, and the quality of the cured article. Just as soon as Scotch herring were firmly established, the bounty was no longer paid, as the necessity for it had ceased to exist.

The Canadian Act and Its Objects.

The Canadian Act has to a great extent, the same object as had the Fishery Board of Scotland, and its introduction has been encouraged by the experience of Scotland in the premises.

The resolution moved by the Minister of Marine and Fisheries states what to the fish merchants and fishermen of Canada is a self-evident truth, viz.: That the pickled food industry of Canada is at present in a languishing condition, but is capable of being revived and expanded to the benefit of all who are either directly or indirectly interested in the industry. The Bill aims at reviving and expending the pickled fish industry, by bringing into general use for curing and marketing pickled fish, such as herring and mackerel, an improved standard barrel, and by a system of inspection and branding, to raise the standard of curing and packing to such a degree that the cured article shall secure the confidence of the fish-eating public both at home and abroad.

Application of the Act.

The Bill applies to salted herring, alewives, mackerel and salmon, and the barrels or half-barrels in which they are salted and marketed. The Governor General-in-Council has authority at any time to extend any or all of the provisions of the Act to any other kind of pickled fish. The territorial application of the Act is the whole of Canada. Inspection or branding, pursuant to the provisions of the Bill is not compulsory. Fish merchants may go on curing and marketing their fish in the same old method or manner if they so desire, and they will not be amenable to the provisions of the Bill, neither will they secure the benefits which are sure to accrue to thhos who take advantage of its provisions if they decide to cure and pack their fish in the old faulty manner.

Officers.

The Governor General-in-Council is to appoint a general inspector and a sufficient number of other officers for carrying out the provisions of the Act.

Every officer before entering upon the discharge of the duties of his office is required to take an oath that he will faithfully, honestly, and impartially discharge the duties required of him as an officer under the provisions of the Act.

The Act gives the Governor General-in-Council power to appoint officers, Commissioners to take and receive affidavits for all the purposes of inspection and branding under the Act and regulations made pursuant to the provisions of the Act.

It is to be hoped that in the appointment of officers for administering the Act the Department will see that men are appointed not because of their political complexion, nor on account of their skill in manipulating a typewriter. The inspection of pickled fish is a step in the right direction, but it must be carried out by men acquainted with the sea, and the fishing industry, and not by office clerks possessed of no technical knowledge and practical experience, or confidence in the measure will be lost by our fish merchants and toilers of the deep. At the present juncture the Fisheries branch of the Department of Marine and Fisheries, has in Mr. J. J. Cowie, its only member, who, by experience and technical knowledge, is capable of carrying out the practical provisions of the Act. Let me venture the hope that pending the day when the Fisheries of Canada will be administered by a competent Commission acting under the authority of the Minister of Marine and Fisheries, and his Deputy—Mr. Cowie—will, under the authority of the Minister and his Deputy, be entrusted with the administration of the Fish Inspection Act without interference of from or by those who have no acquaintance with the Commercial fisheries of Canada, save such superficial information as may be gleaned from Departmental files.

Fish Must Be Cured and Packed in Canada or on Board Canadian Vessels.

The brand provided by this Act is not to be put on any barrel containing herring, alewivese, mackerel, salmon, or any other fifish that may hereafter be brought under the provisions of this Act, or on any half-barrel containing herring or alewives, unless such fish have been caught by British subjects, domiciled and residing in Canada, cured and packed by British subjects in Canada, or on board of Canadian vessels or boats, in accordance with the regulations.

Place of Inspection.

The inspection of barrels and half-barrels and of the fish they contain, is to take place at the port or place where such fish may have been cured and pack-

ed; provided that when curing and packing have been performed at sea the inspection shall take place at any port of landing in Canada.

Inspection—How Carried Out.

Any curer or packer of herring, alewives, mackerel or salmon, having completely cured and packed any or all of such fish for the purpose of obtaining the brand herinafter described shall give notice in writing to the nearest inspecting officer, at his office or residence, of the number of barrels or half-barrels of each of the kinds herein named, which he desires to present to the said officer for inspection.

The inspecting officer on arrival at the place designated in the aforementioned notice shall require the owner or packer to sign a statutory declaration that the fish presented for inspection were cured and packed in Canada or on board of a Canadian vessel or boat within the period prescribed for the various classes of fish by the regulations, and that such fish have been in salt for such number of days as are prescribed for the different classes thereof in the regulations.

On the presentation of the filled barrels or half-barrels to a qualified inspecting officer to be inspected for the brand, such officers shall open, or cause to be opened, so many of the barrels or half-barrels, and shall remove therefrom so many of the fish, as may be prescribed by the regulations, for the purpose of ascertaining whether such fish are of the quality represented and otherwise in accordance with the standard for that particular kind of fish as prescribed by this Act and the regulations.

Nature of Brand.

On every barrel of herring, alewives, mackerel or salmon and on every half-barrel of herring or alewives, which on such inspection as aforesaid shall be found by the said officer to be in all respects packed in accordance with the regulations for that particular kind of fish, there shall be branded with a hot iron, by the inspecting officer or by his order and in his presence, such mark or marks as shall be directed by the regulations. Such mark or marks shall denote the quality of fish contained in the barrel, the year of branding, and the officer by whom or by whose order and in whose presence the brand has been applied.

How Disputes Are Settled.

If a dispute arises between an inspecting officer and an owner, packer, or possessor of any barrels or half-barrels of cured fish inspected by said officer, with regard to the quality or condition of such barrels or half-barrels of fish, the matter of the dispute is to be referred to another inspecting officer, and his decision is to be regarded as final. In the event of the decision of the first inspecting officer not being confirmed by the officer to whom an appeal is taken, the Department of Marine and Fisheries is to pay all the costs incurred in connection with the appeal to the referee, but if the inspecting officer's decision is confirmed then the costs will be borne by the owner, packer, or possessor who brought the appeal.

Legal Procedure.

Part XV of "The Criminal Code" (Summary Jurisdiction Part), is under the Act prescribed as the procedure to be followed in connection with all legal actions or proceedings for a violation of this act. Persons found committing an offence against the provisions of this Act, may be apprehended without a warrant by an inspecting officer or police constable, and taken before a Justice of the Peace, or Stipendiary Magistrate to be examined and dealt with according to law (in the manner provided by Part XV of "The Criminal Code.") The person so apprehended is not to be detained in custody more than twenty-four hours without an order of Commital being made out by a Justice of the Peace or a Stipendiary Magistrate. The Act fixes the Venue for the trial of every offence against the provisions of this Act by stating that every violation of the Act, or the regulations made pursuant to it, shall be deemed to have been committed, and every cause of complaint under the Act and regulations shall be deemed to have arisen in the place in which it was actually committed, or where the guilty party is apprehended.

Offences.

The Act makes it an offence punishable by fine or imprisonment, for any person without lawful excuse, to use an official brand, i. e., a government brand; to falsify an official document; to reuse an inspected and branded barrel without destroying the brand, and it also be said illegal use, ipso facto, forfeits to His Majesty, the barrels in connection with which the illegality has been practiced, together with the fish they contain. Apart from the Act the guilty party would be amenable to the provisions of the Criminal Code relating to forgery.

It is also a violation of the Act for any person without lawful excuse, to have in his possession any branding iron or other instrument such as is used by Government inspecting officers. It is not an offence for a person to attach his private trade mark to any fish cured, packed, or possessed by him. The provisions of the Criminal Code respecting the bribery and corruption of officials or employees of the Government are made applicable by the Act to all inspecting officers appointed to carry out the provisions of the Act. When no sum is mentioned as a penalty for a violation of the Act it may be any amount not exceeding one thousand dollars.

Capacity of Barrels and Method of Construction.

to be as prescribed by the Governor General-in-Council.

The brand is only to be placed on barrels and half-barrels containing cured herring, alewives, mackerel, or salmon of the liquid capacity fixed by the regulations prescribed by the Governor General-in-Council, and which barrel or half-barrel is made in the manner prescribed by the said regulations.

Date of Commencement of the Act.

The Act comes into force on the first day of May, 1915, but it is competent for the Govenor General-in-Council to appoint officers in the interim from the passing of the Act and the said first of May, 1915.

It is a great pity that the Department has seen fit to eliminate the Clauses of the Bill as originally prepared which contemplated paying a bounty to all fishermen and packers using the improved Standard barrel. The new barrel will cost the fisherman much more to procure than does the one now in use, and as a consequence he will be slow to change to a barrel that means to him greater expense for a time with no greater monetary return. In a day when our Canadian Government can guarantee the bonds of railway companies to the extent of many millions; grant high favors to steel companies, milling companies and other great corporations, it seems a pity—yes it is a shame—that nothing is being done with public funds to help the fisherman of our country to improve his methods of operation, and as a consequence, the conditions with which he must contend.

Who's Who in the Fishing World

Between Inverness and Aberdeen, in the northeast corner of Scotland, lies the ancient province of Moray. It is peopled by a race sprung from a blend of the fiery, romantic Celt and the cool, adventurous Norse Viking.

Of that race and in that province, within two hundred yards of the open North Sea, our Who's Who, Mr. John J. Cowie, of the Fisheries Department, was born on December 28th, 1869. At the Academy in the old Cathedral city of Elgin he was educated and prepared for entrance to Aberdeen. University, but instead of taking the university course, however, he chose to ally himself with his father's extensive fish-curing business, and to pass through the weary but thorough process of learning, as an ordinary apprentice, all there

was to be learnt of the art of barrel-making—and it is an art—and of the various modes of treating haddock, cod, herring, etc., etc., with smoke and salt.

This covered experience at the firm's stations in the outer Hebrides; the Orkney Islands; on the Moray Firth ;on the Aberdeenshire coast; in Yarmouth and Lowestoft on the east coast, and Cornwall on the south coast of England.

By the time Mr. Cowie had reached the age of twenty-two he was in full charge of the work of buying, curing and marketing all kinds of fish; this entailed the management of large staffs of work-people at each of the aforementioned stations in turn. For example, at the Aberdeen station alone, a staff of 120 would be employed, and a matter of 20,000 barrels of herring cured, annually, during the season for exportation to Germany and Russia.

Mr. Cowie has seen the steam trawling industry grow from modest beginnings to what it is to-day; but while duly appreciating its proper place and importance in the scheme of British industries, his sympathies were always with the line fishermen in their fight for protection from, and for the proper regulation of this method of fishing.

So much was this so that when, twelve or fourteen years ago, a united effort was made to prevail upon the Imperial Government to re-open the Moray Firth to British trawlers, he, for several months, made "war" in the Press in support of the line fishermen with such good effect that the trawlers' claims were shattered and the Government convinced of the wisdom of continuing to keep trawlers from that semi-enclosed stretch of water.

Few in the British Islands have had a more comprehensive training in the various departments of the fishing industry as it is carried on from John O'Groats to Lands End. Though absorbed in the practical work of the fisheries, Mr. Cowie was at all times a close observer and a keen student of matters pertaining to fisheries science, and administration; and there is no finer field for the study of such than the British Islands, where there are separate administrative boards, and varying methods in each of the three kingdoms.

About ten years ago our subject was chosen by the Government of Canada to conduct a series of experiments in drift net fishing for herring in Canadian waters, and in curing the catches after the manner in vogue in Great Britain, with a view to testing those markets wherein high prices are obtained, and whose supplies are exclusively drawn from England and Scotland.

On completing that work the then heads of the Department of Marine and Fisheries decided that a man with his extensive practical experience and ability would be an important acquisition to the Department's staff and he was offered and accepted a position as a permanent official.

Having been born and bred within sound of the headquarter's bugles of the Cameron, Seaforth and Gordon Highlanders, and filled with first-hand accounts of the deeds of these famous regiments, Mr. Cowie very naturally found himself at an early age keenly interested in military matters, and until lately he was an enthusiastic member of the Volunteer Forces of Great Britain, for which services he possesses a long-service medal..

Mr. Cowie holds the rank of Captain in the Highland Division Scottish Territorial Artillery, and on resigning his commission five or six years ago to come to Canada for good, the British War Office singularly honored him by granting him permission to retain his rank, and to wear the uniform of his old corps during retirement as a mark of appreciation of his work in helping to train and maintain the Force.

The CANADIAN FISHERMAN takes pleasure in adding Mr. Cowie to the Fishery celebrities which it is featuring monthly, and wishes him every success in his work in improving the standard of our Fisheries.

THE FISHING FLEET AT CANSO

By Cecil Boyd

The spring of 1914 will, without doubt, be long remembered as the season in which took place the greatest ice-blockade in the recent history of the Atlantic Fisheries. Early in April the tidy-looking fishing schooners, the great majority of whom were direct from home ports, fitted out for the spring trip, and were all bound for the Magdalen Islands, the favorite haunt of the Spring herring and therefore chief source for the obtaining of bait at that season. But the ice, drifting down from the Arctic, had jammed across the Strait of Canso, as effectually blocking any passage through as if that Strait were non-existent. Day after day added to the number waiting, in Canso harbor, with the patience and philosophy of fishermen, until the mass of spars, hulls and rigging formed a picturesque sight. The three greatest fishing sections of the Atlantic, Nova Scotia, New England, and Newfoundland, each contributed their quota of well-manned craft, until nearly 80 vessels were warped to wharves or anchored in the stream. At the same time, Queensport, Arichat and other ports in Chedabucto Bay were also harboring a large number, making the grand total probably over 150.

Taking a conservative estimate of $14,000 as the average value of the 75 at this port and placing the average crew at the very safe number of 20, we find that our harbor sheltered approximately $1,000,000 worth of fishing capital, while making for the time

Photo White.

FISHING FLEET AT CANSO.

being their homes therein, were 1,500 men only a few hundred less than the entire population of Canso at the latest census.

During the long wait the men found at times the enforced idleness hanging heavy on their hands. The various amusement resorts, the picture show, poolroom and bowling alleys did a thriving business. But the favorite resort, particularly of the Nova Scotians, was the Sailor's Rest. This is a comfortable building erected in 1893 by the W. C. T. U., primarily for the use of mariners, and which has well proven its worth. It is very liberally supplied with reading matter of all kinds, with checkers and other games, and is the proud possessor of an organ. Here the Lunenburg county men, with that heart-whole enthusiasm for music which they inherit as part of their German ancestry, loved to gather and wake the echo with their hearty singing of the old songs and hymns.

It was a pleasant sight and one speaking volumes for the good character of the fishermen as well as the administration of law and order in Canso, to see so many non-citizens, over-loaded with spare time, conducting themselves in a manner meriting the highest praise. One had only to mix observingly with the crowd to be deeply impressed with their genuine worth, sound sense and fine average ability both physically and otherwise. If there be any who yet regard the fisherman as an inferior being, they can never have come in close contact with the men who man the Atlantic fleets.

Shortly after the blocking of the Strait, the Eastern ice also came hugging the shore, thus closing the only remaining way, a roundabout one at best, of reaching the Magdalens. During the first part of May the vessels began moving nearer the mouth of the Strait and at time of writing May 30th) all have left Canso upon their lawful occasions.

CONDITIONS OF THE FISH MARKET IN JAMAICA.

(Special to Canadian Fisherman).

During the month of May the market in Jamaica has been somewhat overstocked with all descriptions of dry fish. The result has been that importers have been forced to sell below cost. This no doubt was due to the fact that shippers in Newfoundland represented there were no stocks available, and yet were able to execute large orders at $36.00 and $37.00 c.i.f. Kingston for fish far inferior to the usual grades shipped to this market, while Halifax has been short of the recognized good grades, as also Bank fish

Sales were made during this month in Halifax of tierces Choice 1st Quality at $36.00 f.o.b.; tierces Prime Shore, $34.00 f.o.b.; and tierces Bank Fish at $33.00 f.o.b. Halifax. Herrings and alewives are both scarce in this market; Newfoundland medium Herrings have been sold at $4.50 f.o.b., and Halifax large at $5.00 f.o.b. Halifax. Stocks of both these have been very limited, and there has been a fair demand in this market for Herrings.

Alewives have been sold at $5.00 f.o.b. Halifax, but seem to be exhausted now, while New Alewives are expected to be offered immediately.

The present high prices ruling on Fish stuffs has tended to check the consumption on this market, but it is hoped with the approach of the new catch prices will be reduced.

Ruling prices on this market to-day. Sales made at:

Casks Newfoundland Codfish, Snowflake Grade, £8 10s. Duty 15s. 9d.

Casks Choice Halifax, £9 for cask. Duty 15s. 9d.; freight, 7s. 6d.

Casks Prime Shore Halifax, £8 for cask. Duty 15s. 9d.; freight 7s. 6d.

Casks Bank Codfish, £7 12s. for cask. Duty 15s. 9d.; freight 7s. 6d.

Casks Pollock, £5 12s. for cask. Duty 15s. 9d.; freight 7s. 6d.

Casks Hake, £5 5s. for cask. Duty 15s. 9d.; freight 7s. 6d.

Brls. Medium Nfld. Herrings, 28s. Duty 4s. per brl.

Brls. Large Halifax Herrings, 30s. Duty 4s.; freight 3s.

Brls. Alewives, 30s. Duty 4s.; freight 3s.

Brls. Large Mackerel, 56s. Duty 4s.; freight 3s.

Brls. Salt Salmon, 78s. Duty 10s. 6d.; freight 3s.

THE NON-PROGRESSION OF THE ATLANTIC FISHERIES OF CANADA

By JOHN J. COWIE, of the Department of Marine and Fisheries.

(The following article appeared in the Departmental Report for 1910, and has been specially revised to date by the author.)

The writer, in compiling this the 43rd Annual Report of the Fisheries of the Dominion, and in looking over the statistics of preceding years for purposes of comparison, has been much struck by the fact that the fisheries of the four eastern maritime provinces—Nova Scotia, New Brunswick, Prince Edward Island and Quebec—are at present, and for that matter, have been for many years, in a somewhat stagnant condition; and in order to quicken the interest of all concerned therein to the need of considering, seriously, what practical steps may be taken towards re-animating the industry he has deemed it a duty to present the matter, as it appears to him, in the form of this article.

Fisheries a Source of National Strength.

The fisheries of nations having all or port of their boundaries washed by the sea have always been looked upon not only as a valuable source of national wealth but as a valuable source of national strength as well.

If the wealth of the national fisheries is not increasing in consonance with the growth of the nation itself, then, a very important source of national strength is becoming sapped and weakened.

So much attention is given by some European countries to their fisheries,f rom the point of view of naval requirements alone, that France, for instance, pays a heavy subsidy or bounty, amounting to $2 per cwt. on certain kinds of fish taken by French fishermen to encourage the building and equipping of steamers and for deep sea fishing such as that carried on in the Atlantic on the "Grand Banks"; while Germany subsidizes heavily any company formed for the purpose of building steamers to develop the deep sea fishery. All of which aims at increasing the maritime population for naval recruiting purposes.

Full Advantage Not Taken of Abundance of Fish.

In the annual report of the Fisheries of Canada the boast is continually made that our fisheries are the most extensive in the world; and rightly so, for of all the many ways in which bounteous nature has blessed this wide Dominion in no way has she been more lavish than in the wealth of food fishes with which she has filled Canadian seas.

But while all this is perfectly true, and although the capture and consumption of sea fish have increased enormously with the demands of a greatly increased population for a cheap and palatable food, both in Europe and North America, especially since the age of steam with its improved railway and steamboat facilities for the conveyance of fresh sea fish to large inland towns, and while Canada has reason to be proud of the annual value of its present fish production, it is perfectly clear from the records kept that we are not taking full advance of the wealth of fish in the teeming waters that wash our eastern shores.

What the Statistics Show.

It is not by any means claimed here that the statistics published annually in the Fisheries Report are of an absolutely reliable character, but it is claimed that fishery officers, generally, are in a position to know, broadly, the upward or downward tendency in the landings of a particular class of fish, and that the result is made sufficiently clear in the figures returned by them to enable the statistician and the economist to reach conclusions respecting the decline or otherwise of any or all branches of the industry.

Taking the statistics then as we have them, what do we find?

First that the grand total value of the fisheries has been gradually, though slowly, forging ahead. Here are the figures for the whole Dominion from 1900 to 1909:—

1900	$21,557,639
1901	25,737,153
1902	21,959,433
1903	23,101,878
1904	23,516,439
1905	29,479,562
1906	26,279,485
1907-08	25,499,349
1908-09	25,452,085
1909-10	29,629,169

In the year 1884 the total value of the fisheries amounted to $17,766,404.

In the second place we find that the fisheries of British Columbia and inland western waters have been giving us the increasing totals, and further that the aggregate value of the fisheries of the four eastern provinces has almost stood still for the last twenty-five years.

The two following tables contain figures showing the relative yearly values of the fisheries of the west and east during the past ten years. Table A. shows the total yearly value of the fisheries of western Canada —seal hunting excluded—from Ontario to British Columbia in the ten years from 1900 to 1909. Table B. shows the total yearly value of the fisheries of Eastern Canada—Nova Scotia, New Brunswick, Prince Edward Island, and Quebec (inland Quebec not included)—during the same period:—

Table A.		Table B.	
1900	$ 6,353,560	1900	$14,283,679
1901	9,954,854	1901	15,045,124
1902	7,400,317	1902	13,970,196
1903	7,470,272	1903	15,122,713
1904	8,503,372	1904	14,593,688
1905	13,036,234	1905	15,855,611
1906	9,911,752	1906	15,804,051
1907-08	8,902,901	1907-08	16,279,356
1908-09	9,303,600	1908-09	15,854,356
1909-10	13,727,038	1909-10	15,615,485

But to look back a little further to the five years from 1884 to 1888, inclusive, it is seen that the fisheries of the four eastern provinces yielded the following yearly values:—

1884	$14,874,413
1885	14,952,183
1886	15,078,962
1887	14,350,282
1888	13,095,767

These figures speak for themselves, and clearly show that the value of fish produced in the eastern provinces named has simply fluctuated round the 15 million dollar mark, with a very slight upward tendency, for a quarter of a century. Put shortly the result reads thus:—On the one hand the fisheries of Ontario and British Columbia in 1884 produced $2,691,991, and in 1909 (with the other provinces of the west included) $13,727,038; on the other hand the fisheries of the four Atlantic provinces produced in 1884 $14,874,413 and in 1909, $15,615,485.

Further, the industry in the east does not appear to offer sufficient inducements for an increasing number of men to engage in such a hazardous and precarious business as that of deep sea fishing as the accompanying table shows:—

Aggregate yearly number of men in vessels and in boats engaged in the fisheries of Nova Scotia, New Brunswick, Prince Edward Island, and Quebec from 1900 to 1909.

Year.	Men in Vessels.	Men in Boats.	Total.
1900	7,155	46,880	54,035
1901	7.047	45,143	52,190
1902	6,886	44,440	51,326
1903	7,285	43,939	51,224
1904	7,115	45,675	52,790
1905	7,294	47,271	54,565
1906	7,286	44,962	52,248
1907-08	6,654	44,037	50,691
1908-09	6,819	46,379	53,189
1909-10	6,263	44,607	50,870

In the year 1893 the figures for the same provinces were 6,896 men in vessels, 43,343 men in boats, making the total number of men 50,239.

Thus we find that in the course of sixteen years the number of men engaged in the capture of fish on board the combined fleets of the four eastern provinces has not increased much; in fact within the last ten years the tendency has been downwards.

During the ten years named the population of Canada has increased very greatly, and as a consequence the field, the forest, the factory and the mine have litrally poured forth an increased flood of wealth.

Why then has the fishing industry of the east failed to share in this cycle of general national prosperity?

Here is a question the solution of which may well claim close and serious attention.

Bounty System Not Giving Results Intended.

Notwithstanding all that has been done from time to time by the Department of Marine and Fisheries in various ways to encourage the development of our fisheries, and in spite of the fact that somewhere in the vicinity of $160,000 per year for the last twenty-seven years have been distributed as fishing bounty in the four eastern provinces, we are face to face with the fact that no advance is being made.

In the latter regard, it may be that the existing system of distribution is wrong, and that some new basis of payment needs to be devised and adopted to produce the effects contemplated at the inception of the system.

To the writer, who has seen the great industries of steam trawling and steam drifting, with all the concomitant and subsidiary industries they bring in their train, grow and expand by leaps and bounds in the course of a decade in Great Britain, the spectacle of beholding an industry, on which such a large proportion of the population of our maritime provinces depends for its very existence, simply marking time for such a long period, is a source of great amazement.

A Cause of Non-Expansion.

In the opinion of the writer, the chief reason why this sluggish condition has existed so long is to be found in the fact that the fish trade of the east is largely a salt fish one and that it has practically reached its limit in the way of expansion, notwithstanding recent improvements in the style of placing the dried product on the market in such forms as boneless and skinless, shredded, etc.

Here are tables showing the yearly quantities of cod and haddock dried in the last ten years:—

Cod.

Year.	Cwts.
1900	897,765
1901	1,004,586
1902	1,002,644
1903	830,883
1904	792,881
1905	738,637
1906	670,775
1907-08	693,955
1909-10	814,041

Haddock.

Year.	Cwts.
1900	103,993
1901	140,130
1902	100,319
1903	75,131
1904	88,113
1905	99,788
1906	82,745
1907-08	75,002
1908-09	87,246
1909-10	111,705

Seventeen years ago the quantity of cod dried was 880,184 cwt. and that of haddock dried 167,578 cwt.

A Hopeful Sign.

That there is a change taking place in the character of the fisheries on many parts o fthe Atlantic coast, however, and that therein lies the hope of re-animation is obvious to all close observers.

In recent years there is an ever increasing quantity of cod being disposed of fresh or green, of haddock fresh and smoked, and in the course of last year "filleted" smoked fish—pieces of fresh fish, usually haddock, minus bones and skin slightly smoked and colored—were placed on the market for the first time by one or two Halifax fish merchants.

If, perchance this may fall under the eye of those who are making "fillets" it may not be out of place to herein ask them to reconsider the question of salting. Those "fillets" being thin and without bones or skin absorb the pickle much quicker than a whole split haddock, for instance, in preparation for smoking, and the tendency is to turn out "fillets" that are too salty for the average consumer. This was the one fault of an otherwise delectable piece of fish last year, which could easily be avoided without injury to its keepable qualities, and it is to be hoped that due attention will be paid to this matter in future.

The accompanying tables convey some idea as to how this trade in fresh and semi-fresh fish has grown in the last ten years:—

Cod, Fresh or Green.

Year.	Lbs.
1900	Nil
1901	Nil

1902	Nil
1903	504,000
1904	1,238,985
1905	1,876,000
1906	2,170,695
1907-08	6,895,900
1908-09	5,432,100
1909-10	4,354,871

Haddock, Fresh and Smoked.

Year.	Lbs.
1900	7,560,625
1901	8,691,669
1902	7,751,883
1903	10,060,283
1904	9,875,700
1905	14,216,384
1906	18,246,866
1907-08	15,259,535
1908-09	11,845,619
1909-10	13,557,442

On those remoter parts of our coast, however, which as yet lie beyond the reach of the railway and other means of quick transportation, the fish business must remain a dried fish one for some time; and while there may not be much hope of increasing the demand and output of this class of fish, yet, in the opinion of the writer, much can be done to at least arrest their decline by, for instance, following the example of the Scotch Fishery Board in periodically sending a duly qualified person to the consuming centres to study the tastes and desires o fthe consumers, and by the distribution of reports to keep these continually before the fishermen and curers at our producing points.

Also very much can be done by the institution of a thoroughly sound system of inspection for all pickled fish.

Indeed some such steps are urgently needed to be taken for the salvation of the cod-fish trade with Europe, especially.

The bounty of $2 per cwt paid by the French government to the French cod-fishing industry is a severe handicap on the Canadian industry as well as on that of others.

In fact the British Consul General at Florence, Italy, in his report for 1909 says:—referring to the Italian trade—"That unless a large catch at Newfoundland and Labrador happens to coincide with a small take by the French fishing fleet, British Cod-fish—products of compete with the French on anything like equal terms and must go to the wall. The only recourse open to British exporters is to devote more and more attention to the quality of their goods from the point of view of the local taste and demand."

If, then the Atlantic fisheries of Canada must rely on the comparatively new and struggling fresh fish trade f ora means of expansion the question remains: What can be done to give this trade the necessary fillip?

Canadian Non-Fish Eaters.

In the northern temperate regions edible fishes are found in much more abundance than in southern and tropical zones, and they therefore, as a rule, form a much more important part of the food supply of the people.

In Canada we live in the northern temperate zone, with a great abundance of fine food fishes in our seas; but can we say that fish forms an important part of our daily diet? It may at once be admitted that we as a northern people are an exception to the rule as fish eaters.

The question may be asked why should this be the case?

Several causes have combined to keep up a non-fish eating nation; chief amongst them being the little attention given until recently, to supplying good fresh sea fish to inland dwellers, owing to difficulties of transportation, and the greater attention hitherto given on the coast to the salt-fish trade. Another is the lamentable lack of enterprise on the part of inland dealers in not realizing the possibility of greatly increased trade that lies in an attractive display of fresh fish, dressed for cooking by expert fish cleaners, in cleanly, up to date fish shops; together with the want of a proper knowledge of the art of cooking fish on the part of the average housewife.

Take the manner in which fresh fish are exhibited for sale in Ottawa as afair sample of that obtaining in most cities of the Dominion. A dealer, usually a butcher, on a Friday morning places a large tin tray in his shop window on which are laid out, generally in an inch or more of their own blood, a few sickly-looking "fresh" haddock, trout, etc., by means of which he expects to entice the custom of those, and there are many, who would eat real fresh sea fish. The exhibition is enough to make most fish eaters vow never more to indulge their appetite.

One Difficulty Overcome.

One hindrance to the greater expansion of a fresh fish trade—that of transportation—has been largely removed by the plan adopted by the Department of Marine and Fisheries in 1907, of assisting shippers of Canadian fresh fish, by providing necessary facilities, as well as by the payment of part of the heavy express charges on their shipments, which was explained fully on page xvii of the Fisheries Report for 1908-9, to enable them to more than compete successfully with the United States shippers who have hitherto practically supplied the larger towns and cities of central Canada owing to the much shorter railway journey from Boston and Gloucester.

Since the inauguration of the system the quantity of fresh fish annually brought into Canada from United States ports has been strikingly reduced, and that shipped inland from Canadian Atlantic ports correspondingly increased, and it now remains for the energy and enterprise alone of our fishermen and fish merchants to entirely supply the present home demand from Canadian sources.

But even the capturing of the whole of the home market by Canadians will not, until the demand for fresh fish be mightily increased, bring about the much-to-be-desired growth in our Atlantic fisheries, and the question still remains: What is to be done to create the fish eating habit to produce the expansion needed?

A Possible Solution.

In the opinion of the writer, this matter might be solved, and the whole fishing business of the country benefitted and enlarged by starting an educational campaign by means of interesting articles in the newspapers, and the dissemination of literature with the object of teaching the public how to use fish as a daily diet and not merely as an occasional change from meat, of convincing the housewife of the great food value of fish, and of showing her how she may serve it up in many tasty and appetizing ways.

Advantage might also be taken of the various provincial fairs—especially inland fairs—held annually throughout the country, to advertise the produce of our seas by the erection of a model fish-shop in which

an expert could demonstrate—for the special benefit of dealers—how to clean and prepare fish of various kinds for cooking, and how the fish should be displayed in a shop window so as to attract buyers.

What Great Britain is Doing.

Notwithstanding the enormous extent to which the fresh fish trade of Great Britain has already grown it is realized that full advantage has not yet been taken of the means of expansion, that the public has not yet learned the proper value of fish as a food, and that organizd effort is necessary to bring about a still greater increase in the sale and consumption of this whilesome and nourishing article of diet.

There is an organization known as the "National Fisheries Protection Association," embracing in its membership, besides many members of both houses of Parliament, representatives of all branches of the fishing industry in Great Britain, with headquarters in London, which convenes periodically and deliberates on all matters pertaining to the welfare of the national fisheries.

This association, with the active co-operation and assistance of all fish dealers, etc., is at present conducting what is called a 'Fish for Food Campaign" throughout the British Islands, with a view to arousing further public interest in the advantages of a fish diet.

The plan of campaign consists in the issuing to fishmongers, and others handling fish in any way, booklets for free distribution amongst the consuming public, containing besides interesting articles on the food value of fish by eminent medical and scietific authorities, many recipes designed to help customers to cook fish in a variety of new, inexpensive and appetizing ways.

Advertisements such as the following are also prominently displayed:—

Why Eat More Fish?

Because—

Fish as an article of diet is more nourishing and wholesome than meat.
Fish is sustaining and is quickly digested.
Fish is essential to making children healthy and strong.
Fish can be cooked in a large variety of ways and makes many daily dishes.
For your health's sake, eat more fish.
Ask your grocer for fre recipe book: Tasty Ways of Cooking Fish.
Eat fish and more of it.

If the necessity for putting forth a unted effort to increase the demand for fish by advocating a more regular use of it in the daily dietary of the British Isles be great, it is bound to strike all who may lay any claim to a knowledge of the fishing business of Canada that the need for taking some such steps in this country is immensely greater, for much of the prejudice existing in Canada to-day against a more regular use of fish as food is due to the want of a proper appreciation of its healthlgiving qualities.

In writing a prefatory article on the "Food value of Fish" for the booklet used in the campaign in LL.D., F.R.S., vice-president of the Royal Institution of Great Britain, says in part:—

"That fish should thus have been found sufficient for human requirements in people displaying vitality is not surprising when it is known that it fulfils the two great functions of food, by suppyling the material by which the body is built up and repaired, and the material by means of which it does its work. To revert to the old, and, if not strictly accurate, still serviceable analogy of the steam-engine, fish contains the metal of which the engine is constructed, and the fuel for getting up steam. It contains what is called proteid, the nitrogenous constituent, which is mainly concerned in the formation of the tissues of which the body is composed, and it contains fat—one of the main sources from which the energy of the cells is derived.

"It is true that, both as regards proteid and fat, fish is inferior to meat. It may be estimated that as regards fat, one and a-half pounds of fish are equal to one pound of lean beef in nutritive value, and that in the nutritive nitrogenous material the flesh of white fish is from 2 to 4 per cent poorer than that of meat. But the price of white gsh is considerably less than that of meat, and when it can be bought at 3d or 4d a pound, as the coarser kinds of fish always can be, it is, for equal nutritive value, exceedingly cheap when compared with beef and muton, even allowing for the larger proportion of waste and unedible material in fish.

"As a rule it is the cheaper, or as they are unfortunately called, the coarser kinds of fish, such as skate, dabs, mackerel, hake, haddock, and sprats that afford the most nourishment for a given sum. It has been remarked that the humble bloater offers the largest amount of animal nourishment for a given price of any animal food and that two salt herrings contain as much proteid as is requite in the daily dietary of an ordinary working man. One pound of fresh herring at 2d is certainly as sustaining as half a pound of beef at 6d."

* * * *

"It cannot be too strongly insisted on that for working people of all classes—those who work with their hands—fish is an economical source of the energy necessary to enable them to carry on their work, and that for children and young persons, it furnishes the very stuff that is needed to enable them to grow healthy and strong. Even the rearer sorts of fish are sometimes worth the money paid for them. Salmon, for instance, weight for weight, contains nearly three times as much nutriment as cod, and so a pound of salmon at 1s 6d is not more costly, from an alimentary point of view, than one pound of cod at 6d, or a pound of mutton at 10d. When it is practicable, as I suppose it will be, to place on the market, even in our midland towns farthest from the sea, the finer varieties of fish, such as sole, turbot, and brill, at more moderate prices than have hitherto ruled, then these will be by no means extravagant luxuries even in humble homes. But it is the coarser kinds of fish, such as skate, mackerel, hake, dabs, sprats, haddock, and conger eel, which can be bought at 3d or 4d a pound in most towns, that the great and hitherto much-neglected storehouses of food for the people is to be found.

"It is not possible or advisable that fish should to any large extent take the place of butchers' meat in the diet of the inhabitatnts of this country. There is plenty of room for both. There are amongst us classes who habitually eat too much butchers' meat, and who would do well to reduce their meat ration and substitute fish for some part of it; but there are also classes, much larger classes, who habitually eat too little butche rs' meat, and to whom a supply of cheap fish should be an inestimable boon.

* * * *

Instruction in the preparation of fish for the table in at least a dozen different tempting ways should, I think, be a leading feature in the cookery classes in

all elementary schools. A fish cake of common skate, well made, is a delicacy that an epicure need not despise; and a well-seasoned fish pie of cod, served hot, is really a deainty enough dish 'to set before a king.'

One of the great recommendations of fish as a food is its easy digestibility. Even and delicate stomachs, like those of under fed children, dyspeptics and convalescents can deal with it without difficulty. The rapidity with which any kind of meat dissolves in the scomach depends unon the fineness of its fibres. Beef is less degistable than mutton, because its fibres are longer and harder, and for the same reason mutton is less digestible than the breast of a fowl. But in fish the muscle fibres are very short, and arranged in flaky masses which are easily separated from one another, and hence fish lends itself to comparatively speedy digestion. Of course, fish differs greatly in digestibility, the lean kinds being more quickly disposed of than the fat; and salt fish owing to the hardening of its fibre during salting, lingering longer in the stomach than fersh fish.

But the digestibility, absorbability, and nutritive value of fish must largely depend on the cooking of it. When presented in a savoury for mit not only stimulates the flow of saliva, but by its mere flavour sets the gastrict glands a-working, even before it has reached the stomach; whereas when served in a watery and insipid way, it fails to afford either stimulus or satisfaction."

Great Britain is not alone, however, in its efforts to populàrize the use of fish among the masses.

In Germany, at this moment, there is a propaganda in full swing with the same objeet in view.

In the last report of the Fishery Society, which is undertaking the main part of the work, it is said that the common ignorance of the methods of preparing tasty and varied dishes of fish is one of the greatest obstacles encountered.

In order to overcome it, clasess have been started in Berlin and a large number of other towns—"sea-fish cooking classes"—for housewives and girls. Besides, this special commissions have been appointed in Breslau and Dresden to encourage the use of fish.

By the inauguration of a campaign, then, having for its objects the expansion of the Canadian trade in in fresh fish, on lines similar to that now going on in Great Britain and Germany, we would be not only helping a languishing national industry to assume its rightful place alongside of others that are progressing by the proverbial "leap and bound," but we would have the added pleasure of knowing that a hardy race of seamen from which our future naval force will have to draw its raw material is being maintained and increased.

The intention of the writer, as stated at the beginning, has been to simply arous interest in, and create discussion on the backward condition of our Atlantic fisheries by the presentation of a few facts, and to point to a possible means of progress.

The question as to how a "fish for food campaign" may be organied, and as to who should undertake the initiation of it is left to be evolved in the course of the discussions, to which it is hoped this article may give rise.

The writer has to add that since the foregoing article was written the fresh and mildly-cured fish trade has expanded greatly. Some of the suggestions thrown out in the article for increasing this trade, have been acted on.

The Honourable, the Minister of Marine and Fisheries, last year securing an appropriation for the purpose of making, and did make, a thoroughly representative fisheries display at the National Exhibition at Toronto. He also authorized the printing and dissemination of literature at the Exhibition, setting forth the advantages of a daily fish diet, and showing many appetizing ways of cooking it. There is even now evidence of an increased demand, as a direct result of this.

Much more remains to be done, however, by the producer and shipper at the coasts, as well as by the retailer in the inland cities and towns, in order that fresh fish may be always as atractive to the consumer as fresh meat.

In a later number of the "CANADIAN FISHERMAN" the writer will have something more to say on this phase of the subject.

CHEAPER THAN MEATS

That red salmon is richer in nourishing properties than any other of the meats is the announcement made in a circular recently issued by the bureau of fisheries at Washington. Experiments conducted by the bureau show that a tin of pink salmon, which in the United States costs 12½ cents, contains as much fuel and body-building material as a dozen of fresh eggs, which cost about 36 cents; 33 cents worth of sirloin steak; 32 cents worth of mutton; 21 cents worth of chicken, or 13¼ cents worth of smoked ham.

The manner of preparing the salmon, according to the circular, is of the best. While meats are inspected, they are handled by many persons afterward, exposed in the market and may be decayed or infected when the consumer gets them. The salmon on the other hand come directly from the cold waters which are their habitat; are washed and delivered alive to the "iron chink,' whence no human hand touches them, until dressed and minus heads and tails and fins, they find their way into the sanitary solderless cans and are cooked. The rapid expansion of the canning industry on the Pacific coast shows that the people are not ignorant of the value of this food. The trade in canned salmon is already very large, and the abnormal rise in the price of meats will tend no doubt to encourage its growth. The old idea that tinned foods were dangerous and to be avoided, is rapidly giving way before th eimproved and sanitary methods of the present day, and it is now a rare thing to hear of anyone being poisoned by eating tinned foods of any kind.—Exchange.

MARINE MOTORS

The business in Marine Motors for fishery boats continues to grow, and we hear that it is estimated that between eight hundred and a thousand will be added to those already in use on the coast this year. Up to the present the motors imported have been, while varying in value, all safe engines, but since the value and extent of our markets have been discovered, we are likely to have some dangerous and useless engines foisted on us in the near future. Under these circumstances, we would suggest to our fishermen to have motors examined by competent engineers before buying them, so that they may not be taken in. Local competitors have ran the price down to where there is a great inducement to unscrupulous agents to enter the market with inferior or worthless engines. Therefore, all purchasers should have motors, they intend to buy, examined by a competent engineer.—Trade Review.

FISHERMAN AND BUYER, WHO MAKES THE LARGEST PROFIT?

By F. J. HAYWARD.

A Few Cold Facts and Some Suggestions.

Every producer whether it be of canned goods, clothing, or tin tacks, in order to come out on the right side at the time he takes off his balance sheet, figures out the actual cost of the article he manufactures. Then he adds on his profit, and so comes out on the right side. But the cost does not mean the value of the raw article and time consumed in packing the same. If the cost of the raw materials comes to $1.00 and the time used in converting the same into the manufactured state is 50c, then the cost of the article in its completed state is not only $1.50. To this amount must be added the proportionate interest on the plant, building, machinery depreciations, repairs, office sales expenses, insurance, delivery, etc. Then the profit is to be added. Yet how many thousands of people who feel capable of reducing the high cost of living, think that the merchant who buys a thing for $1.00 and sells the same for $1.50 is making 50 per cent profit and so howl accordingly. Let them figure out what the merchant's overhead expenses are at first.

Now, if one stops to consider, is there any other business on the face of the earth where this most common mistake is made more often than in the fish business? How often have we heard uncomplimentary remarks about the "merchant"? He is certainly bound on the high gear to the warmest place within the conception of the human mind if he is all that certain misinformed people think him. This man buys fish at 5c per lb. right out of the vessel. He sells for 7c, and is considered to have cheated the fisherman out of at least another cent. If the man that gets 7c for the fish without any of the hard work incidental to the industry, surely he can give the fisherman 6c, and have the other 1c, which is ample for him. Is this not a most mistaken idea? But let the "kicker" put his money into the buyer's business, and how quickly he changes his tune then. He sees that the thousands of dollars invested in wharves, buildings, smoke-houses, machinery and the hundred and one incidentals to the successful carrying on of the business of buyer, are nowhere repaid by the 2c supposed profit. Added to the premises are the wages of the labourers, office staff, insurance, and most of all the time that the buyer has to wait for his money. The fisherman gets cash. But does the buyer? He may if the market is bare at the particular time that the fisherman reaches the wharf with his catch. But this is a most rare occasion. No, the buyer has to wait for his money, perhaps many months, and then take a chance at being what in common parlance is called "stung." If he figures out all his overhead expenses, he bases his buying and selling price accordingly. Unless he does this, he goes the way of so many buyers who have started out and "boosted" the prices to fishermen. They are like the fig tree of Biblical fame.

But the same Mr. Kicker will ask why the "merchant" can wax rich and sport around in a motor-car. If Mr. Kicker had a similar amount of capital and clear-headedness, he could also do the same. Many have done so. Life has been said to be one big poker game; and if I remember anything about that game one has to take some mighty big chances. True the fisherman takes chances when he goes out in all weathers and risks his life and boat on the chance of a "hunch" that the fish will be where he makes for. But he knows that he can sell his fish once that he has it. The price may not be up to the usual, but all the same he gets something. It is not always the case with the man that buys his fish. He takes a chance on re-selling on a full market. If he cannot do so, he has to either freeze the fish or salt them if fresh, or else store until the market allows him to sell at a profit. In one sense he is lucky to be able to do this. In another he is a benefactor to the fisherman. But whatever he does, he risks the money that he gives the fisherman. If he becomes rich it is not at all at once. It is rarely that the buyer makes in proportion to the capital invested, as much as the mackerel fishermen do on occasions of a big run. The merchant or buyer gets his money by sheer hard work from morning to night. He must be always on the job, always in touch with what all his competitors are doing; he must know what other parts of the world are offering and so what effect they will have on the market. Then he must buy accordingly. It is only by selling at the right time that he can make on his investment.

But this is hardly what I started out to say. My idea was to show that in the fishing business overhead expenses must be reckoned with. If the fisherman sells his fish for 5c to the buyers, and the public purchases this fish in the stores, for 10c, there are endless discussions about the way the public is held up. Let the low cost-of-living crank figure out what the fisherman has risked to get the fish, what the expense of the buyer are, and what the cost of selling the fish is to the retailer; I think then that he will not be so free with his criticisms. It is this very same man that goes to the store noted for its prompt delivery system, and orders 25 cents worth of fish and wants it sent about four miles. I also wished to tell the fisherman that he must not think that if the price he receives for his catch is $10.00 that he is making this amount. He must deduct from this $10.00 the proportion of expenses whilst on that particular fishing trip. The expenses have to include the cost of the boat, materials used for the operation of the boat, the wages of the owner of the boat and help if any, the cost of the fishing gear and grub used on the trip. In fact a proportion of the whole of the original outlay has to be charged up against every trip. This done every time, the fisherman knows exactly what he has to do to make expenses. Anything over the amount in question is profit, if the fishermen as a body were shown how to do this, then there would be far less hard feeling for the buyers of their catch. I understand that the object of a union is to further the cause of those in the union. What better assistance can be given than by the various fishermen's associations joining together and going right to the "merchant" or buyer. Let them discuss the question thoroughly, get an idea of the overhead expenses of this man, and then show their members that they are being paid all that the business will stand. Let them show the fishermen how to reckon their individual overhead expenses. Then I believe that there would be less hard talk going

on all around. After all it is only team work that produces results, so with fishermen, buyers and retailers all working together the results cannot be anything but beneficial to the whole trade.

I may add that I am neither a fisherman, a buyer in the real sense of the word, or a retailer. My sympathies are not with any one classs. But I am keenly interested in the furtherance of all that will help along the fishing industry of Canada and all connected with it.

THE LOG OF A RECORD RUN

Come all ye hardy haddockers that winter fishin' go,
An' brave the seas upon the Banks in stormy wind an' snow.
To all who love hard drivin'—come an' listen to my lay
Of the run we made from Portland on the Mary L. Mackay.

We hung the muslin on her, as the wind began to hum;
Twenty reckless Nova Scotiamen 'most full of Portland rum.
Main and fores'l, jib an' jumbo, on that wild December day,
And out from Cape Elizabeth we slugged for Fundy Bay.

We slammed her to Monhegan as the gale began to scream,
And the vessel started jumpin' in a way that was no dream,
With a howler o'er the taffrail, boys, we steered sou'-west away.
Oh, she was a hound for runnin' was the Mary L. Mackay.

Storm along! an' drive along! an' punch her through the rips!
Never mind the boardin' combers an' the solid green she ships!
"Just mind yer eye an' watch yer wheel!" the Skipper he would say.
"Clean decks we'll sport to-morrow on the Mary L. Mackay!"

We lashed the hawser to the rack and chocked the cable box,
An' tested all the shackles on the fore an' main sheet blocks.
The steward moused his pots an' pans and unto us did say,
"Ye'll get nawthin' else but mug-ups on th' Mary L. Mackay."

The sea was runnin' ugly an' th' crests were heavin' high,
An' th' schooner simply scooped them 'til her decks were never dry.
We double griped the dories as the gang began to pray,
For a breeze to whip the bitts from out the Mary L. Mackay.

We warmed her past Matinicus and the skipper hauled the log.
"Sixteen knots! Lord Harry! Ain't she jest the gal to jog!"
An' the half-canned wheelsman shouted, as he swung her on her way,
"Just watch me tear the mains'l off the Mary L. Mackay!"

The rum was passing merrily an' the gang were feelin' grand,
With long-necks dancin' in our wake from where we cleared the land.
But the skipper, he kept sober, and he saw how things might lay,
So he made us furl the mains'l on the Mary L. Mackay.

Under fores'l and her jumbo we tore wildly through the night,
An' the roarin' white capped surges in the moonshine made a sight
To fill your heart with terror, boys, and wish you were away
At home in bed, and not aboard the Mary L. Mackay.

Over on the Lurcher Shoals the sea was runnin' strong
In foamin' angry breakers—full three to four miles long,
An' midst this wild Inferno, boys, there soon was hell to pay,
But they didn't care a hoot aboard the Mary L. Mackay.

To the box was lashed the wheelsman, as he steered her through the gloom,
An' a big sea hove his dory-mate clean over the main boom.
It tore the oil pants off his legs an' we could hear him say,
"There's a power o' water flyin' o'er the Mary L. Mackay!"

The Skipper didn't care to make his wife a widow yet,
So he kept her off for Yarmouth Cape, with only fores'l set.
An' past Forchu that mornin' we shot in at breakin' day,
An' soon in shelter harbor lay the Mary L. Mackay.

From Portland, Maine, to Yarmouth Sound, two-twenty miles we ran
In eighteen hours, my bully boys, now beat that if you can.
The gang, they said, " 'Twas seamanship!" The Skipper, he kept dumb,
But the force that drove the vessel was the power of Portland rum.

F. WILLIAM WALLACE.

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company.)

Trade is very good in fresh fish, and neglected in salt and pickled lines. Gaspe salmon and brook trout, due to late spring, are arriving in small quantities and selling at fancy figures. Mackerel is also late this season. Shad is plentiful, and selling freely at comparatively easy prices. Live lobsters have been plentiful and have sold as low as 12c per lb. Lately canned lobsters have advanced $1.00 per case, this year's pack. A small advance is also expected on this season's pack of British Columbia salmon. In smoked and boneless fish trade is dull and uninteresting. Labrador pickled salmon is in good demand at steady prices.

Fresh Fish.

Mackerel	per lb.	.11
Gaspe Salmon	per lb.	.25
Halibut	per lb.	.11
Haddock	per lb.	.05
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Roe shad, piece	per lb.	.50
Buck shad, piece	per lb.	.20
Blue fish	per lb.	.12
Live lobsters	per lb.	.20
Alewives, apiece	per lb.	.02
Whitefifish	per lb.	.12
Pike	per lb.	.07
Perch	per lb.	.05
Bullheads	per lb.	.10
Carp	per lb.	.08
Shad—Roe, a piece		.50
" Jacks, apiece		.30

Canned Salmon

Red Sockeye Salmon, 4 doz. case	7.10
Red Cohoes Salmon, per cs. 4 doz.	6.00
Pink Salmon, per cs. 4 doz.	4.00
Boneless Smoked Herrings, box	1.10

Smoked Fish.

Haddies, per lb.	.08
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrinks, box	1.10

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.12	.13
Salmon, Red—Steel heads, per lb.	.12	.13
Salmon, Red—Sockeyes, per lb.	.09½	.10
Salmon, Red—Cohoes or Silvers, lb.	.08½	.09
Salmon, Pale Qualla, dressed per lb.	.09½	.08
Halibut, white western, large and medium, per lb.		.08
Mackerel, Bloater, per lb.	.07	.08

Frozen Fish—Lake and River.

White fish, large	per lb. .10	.11
White fish, small Tulibees	per lb. .06	.06½
Dore, dressed or round	per lb. .08½	.09
Pike, dressed and headless	per lb. .06½	.07
Pike, round	per lb. .06	.06½

Pickled Fish.

Salmon, Labrador, Tierces, 300 lb.	20.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C., Brls.	15.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.50
Herrings, Labrador, Half Brls.	3.50
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs	1.25
Holland Herrings, imported milkers, half brls.	6.50
Holland Herrings, imported milkers, kegs.	.75
Holland Herrings, mixed, half brls.	6.00
Holland Herrings, mixed, kegs	.65

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brl.	
No. 1 Green Cod, small, brl.	
No. 1 Green Cod, Haddock, medium, brl.	
No. 1 Green Cod, Haddock, small, brl.	
No. 1 Green Cod, Pollock, medium, brl.	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	
Dried Pollock, medium and large, 100lb. bund.	
Dressed or skinless Codfish, 100 lb. cases	7.00
Boneless Codfish, Ivory Brand, 2lb. blocks, 20 lb. boxes, per lb.	.07½
Boneless Codfish, Dreadnought Brand, 2 lb. blocks, 20 lb. boxes, per lb	.06½
Boneless Codfish, strips 30 lb. boxes	.10
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes	.13

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysters, per barrel.	11.00
Malpeque shell oysters, selected, C.C.I., per barrel	12.00
Malpeque shell oysters, selected J.A.P., per barrel	
Malpeque shell oysters, selected XXX, per barrel	
Malpeque shell oysters ordinary, per barrel	
Malpeque shell oysters, caraquets, per barrel	
Clams per barrel	7.00
Mussels, per barrel	6.00
Live lobsters, medium and large, per lb.	.20
Boiled lobsters, medium and large, per lb.	.22
Lobsters—New Crop—1 lb. flat tins, per case	24.00
Lobsters—New Crop—½lb. flat tins, per case	25.00

THE BIOGRAPHY OF A FINNAN HADDIE

By ROY M. WHYNACHT.

Since I was taken from my native element I have been through various and thrilling experiences which have greatly changed my appearance, so that I do not in any way resemble my former self. In a vague manner I have followed the novel and, to me, most absurb operations to which I have been subjected. But at last I have a feeling that the end is near; for I am rapidly getting warmer and I know that my temperature must be much higher than it has ever been in the past. But, before I depart, I think truthful account of what happened to me, since I was taken from my happy home in the cool waters of the Atlantic, might be welcomed by many, as there are approximately about three million similar experiences annually from the province of Nova Scotia.

I was led into temptation one fine morning the last of February while leisurely swimming along over our favorite early-spring haunts, known to the fishermen as "Brown's Bank," which is situated about fifty miles south of Cape Sable, N. S. My temptation came in the form of a strong appeal to my stomach, and feeling fairly hungry after making the migration from the shores of the Bay of Fundy to Browns Bank, I made a vicious bite, at a most choice and harmless looking piece of herring, and immediately I realized that my doom was sealed, for I could not dislocate that fatal mouthfull nor tear myself away from the strong little thing that became fastened in my gills!

After tiring from my struggles for freedom, I could do nothing but hang there and await further developments. I had not waited long when I could feel myself being drawn to the surface of the water, and then I noticed that I was caught on a machine handled by a couple of those wonderful creatures called men. I afterwards heard them refer to the thing on which caught as a "trawl." I was then tossed into their "dory" and found myself among a lot of other fish, most of which were haddock. I never felt lonesome after that, for I always had plenty of company until just a few minutes ago when I was separated from my last few choice pals. They were very faithful pals too, for we all stuck together closer than brothers in our little fifteen-pound box, in which we travelled from the Western end of Nova Scotia to the city of Montreal.

It will be necessary for me to hurry this narrative, as my environment continues to grow hotter, and I am of the opinion that I am being cooked!

When I had t heprivilege of becoming one of the unfortunates which landed in the dory, it seemed to be well loaded and was therefore rowed about half a mile to the vessel, where these men had their headquarters. When we came up alongside the vessel where these men had their head-quarters. When we came up alongside the vessel I noticed that there were eight or nine other dories and that they all had caught full loads, so that altogether there must have been about six or seven thousand fish, which I think they considered a pretty good "set." We were then taken from the dories and tossed up on the deck of the vessel where we certainly received some severe treatment. Our boat being one of the last to arrive at the vessel's side, we landed on top of the pile of fish on deck and were therefore the first to be attended to by the bunch of men who gathered around us. I was suddenly grabbed by the head, my throat was quickly cut, my belly ripped open, and I was then passed along the operating table to another fellow, who seemed to take pleasure in relieving me of my gills, entrails, etc., and even my heart, which, at least, I was pleased to note was thrown back to the happy waters. I was surprised that they did not behead us also, but we were allowed to retain our heads, so we were still able to think clearly. As soon as this carving was over we were dropped into the hold of the vessel, where we were carefully stowed in chopped ice. To keep us from slipping and sliding about the hold in rough weather and thereby injuring us and perhaps endangering the vessel, we were iced in pens which held about a thousand fish each. I was buried in ice and other haddock were iced over me so that soon all was darkness. I could not accurately estimate the time we remained in the vessel's hold, but I do not think we could have been down there more than two or three days.

Our one hundred and fifty mile sail to market was uneventful so far as we in the hold were concerned. After fourteen hours of swift sailing, we could feel the vessel haul in to her wharf and make fast. We had to remain in our dark and chilly surroundings while the captain hustled to his prospective purchasers of the trip and proceed to give them a faithful (?) account of the stormy weather, poor bait, hard-luck fishing, etc., etc., and, of course, the high price he expected to get for us poor, half-frozen things in the hold. But in due time a price was evidently agreed upon, for a faint ray of light suddenly came through the open hatch and we were soon being hoisted up in big baskets and carefully weighed in 200-pound lots on the wharf. We never had half a chance to warm up, for we were immediately laid to rest again in more chopped ice

Next day the monotony of this ice treatment came to an end; for we were taken from the ice to the "dressing room." Here the sharp knives again ripped us from our already mutilated bellies down to our very tails. Then, after the dark skin was removed from our napes and we were thoroughly washed, the most severe shock was at hand—we were suddenly beheaded and dropped into a tub of strong pickle! Our friends on Brown's would have been unable to recognize us could they have seen us from that moment, for we were as flat as flounders and of almost triangular shape. Still the end was not yet. After a two-hours soaking in the brine we were strung out on long rods and hung over a hard-wood fire, which was arranged so as to create a thick smoke. The smoke curled upwards and around us slowly until our remaining senses were unable to act, and soon we passed into a sort of smoky dream.

On our revival we happily found that the doors and ventilators of our smokehouse had been thrown open and the fresh air was again replacing the smoky atmosphere. This refreshed us somewhat, so we

were again able to follow proceedings. We were carried out on the rods and taken to the packing room and hung up on the cooling racks for an hour or so. Then we were taken down and assorted and weighed and carefully packed in fifteen and thirty-pound packages. Ours happened to be a fifteen-pound box and contained three other haddies besides myself, all of which were selected, as I understood we were being packed under a very high-class brand.

We were then first treated to our first and only ride over the railroad and next morning, which was four days from the time we left Brown's Bank, we landed in the city of Montreal. Fish seemed to be in good demand at that time, for we were not long displayed by one of the merchants when we were bought and sent to a swell restaurant.

Evidences now only too plain, convince me that I have been cooked, for I am being carried, on the installment plan, by pretty girls to a large and classic dining room, where, I am of the opinion, I shall get mine. To confirm all this I have just noticed an item on the menu, reading: "Creamed Finnan Haddie."

But, thank goodness, I make a happy exit from this world, for I just heard my consumer remark "What a very delicious morsel."

FISHING THE MODERN WAY

(G. T. White, in Motor Boat).

(The skipper speaks to a gasolene motor salesman who is aboard).

I don't want none o' yer durned sea skunks,
A sail's good enough fer me.
I don't want none o' yer gasolene
When I go off t' sea.

I don't want none o' yer old engynes
To slather my boat with ile.
I like t' be out in half a gale,
No reefs, an' let her bile.

They tell me a motor 'll give me speed—
I'm no durned old hydroplane,
But one o' the easiest-goin' men
T' be found on the coast of Maine.

I've sailed this schooner from Labrador
T' south o' the Floridy Key,
An' I never spent one penny yet
Gettin' pills fer old John D.

What's that ye say? I'm a-gettin' old
An' don't like the things that are new.
Why I kin git up the ratlins now
As fast as I uster do.

I kin reef and I kin steer, by Gosh,
An' do my stint o' work.
An' I don't need no durned engyne
That's just an excuse t' shirk.

I cal'late that one o' them things
Is right enough in its way;
Fer them that likes fer t' spend their time
Aboard o' a yacht all day.

But I've sailed schooners fer fifty year
Come the nineteenth day o' May.
Don't be atryin' to tell t' me
That I ought to do things yer way.

Well, yes, I s'pose I'm sot in my ways
An' I live in a sleepy old town,
But then— Well, what do y' think o' this?
The dad smashed wind's went down.

That's just my luck; we was goin' fine.
Gosh knows when we'll get t' port,
An' the hold below is packed nigh full
O' fish that I just caught.

T'morrer they won't bring half the price
As I could agotten t' day—
Just look at that motor fishin' boat,
He'll be stealin' my trade away.

Gol darn the noise o' that slattin' sheet
An' the creak o' that swingin' boom.
I wish— By Gosh I believe I would
If I only could find the room.

What's that—right under the cockpit there
With the flywheel handy out here.
Hmm—what's the price uv a husky one?
Gee whiz! That ain't so dear.

I've got more'n that up at the bank
Laid by fer a rainy day,
But I guess I'll spend it fer ca'ms instead,
An' go fishin' the modern way.

NEW FISHERIES HEADQUARTERS

Vancouver, May 30th, 1914.

Editor Canadian Fisherman:

Sir,—The U. S. Bureau of Fisheries has decided to make Seattle its local centre of activities in the Pacific North West. The Washington State Fish Commission will also move there from Bellingham. It is proposed to house both Departments under the same roof, and also to erect a structure in which permanent exhibits can be installed and research work carried on under the most favorable auspices. Considerable revenue will accrue to the City of Seattle thereby. This is an exceedingly shrewd move in the way of corralling both the fisheries of Alaska and Paget Sound. It also solidifies the position of Seattle as the Gateway of the North. Really, I cannot see why the Pacific Coast Province of Canada ignores all suggestions in this behalf. Mr. Bowser says that he has a wonderfully efficient Fish Commission in Victoria. If he has, it is indeed over-modest in operation, for I never even heard of it. The Marine and Fisheries Department has three agents on this coast, efficient officers, but not ichthyologists, engaged on Fisheries work. There are a few hatcheries notably ill-located and poorly equipped. There is also a weird "biological research" plant at Nanaimo, B.C., of political appointees, and so forth. Of course, enough and to spare. Inspectors a-plenty, but constructive administrators nil. Protective cruisers are no doubt needed to police local waters, but one deep-sea research vessel would be infinitely more worth while. I know it is said that British law does not embrace "administration" of anything, except public utilities. At all events, Ottawa will not vote money merely to develop natural resources—such as Fish.

A. E. HOWARD.

GRAND MANAN AND ITS FISHERIES

By COLIN McKAY.

One fish weir on Grand Manan stocked $23,000 last year, and the owners' profits probably ran as high as one thousand per cent on their investment. Of course, that is an exceptional case, and last year was an exceptional year for most kinds of fishing on Grand Manan. Large catches of sardines were made and high prices were received, because elsewhere the sardine fishing was rather poor. But taking it by and large weir fishing on Grand Manan is a profitable business. It costs between $1,000 and $2,500 to erect a weir, and the returns range from $1,000 to $5,000 a season.

According to the last published report of J. S. Calder, fishery inspector for St. John and Charlotte counties, there were 59 weirs on Grand Manan, valued at $86,000. Mostly the weirs are owned on the share plan, one share representing an eighth on the investment. One man may have shares in half a dozen or more weirs; the Grand Manan weirman does not put all his eggs in one basket. Usually two or three of the men owning shares in a weir supply the labor to operate it.

Grand Manan weirs are built so that at low tide there is still eight or ten feet of water in them, and the fish caught in the weir are taken out by means of seines. If there is no canner's boat around to take the fish, they can be kept in the weirs for a short time, or allowed to escape. Two years ago there was little demand for sardine herring, and very large quantities were allowed to escape from the weirs. In the past hundreds of thousands of sardines have been taken out of the weirs, and used as fertilizer on the fields.

There are no sardine canneries on Grand Manan, but Scott D. Guptill, a native of the Island and a member of the New Brunswick Legislature, is of the opinion that a factory, properly managed, would pay very well. Very little interest has been taken in the possibilities of a sardine factory on the island, but the opportunities should be as good as on the mainland of Charlotte county. Grand Manan not only catches large quantities of sardines—in some seasons more than it can sell—but it has the skilled labor necessary for carrying on canning operations, because for years people have been going from the Island each season to work in the canning factories of Eastport or Lubec. Local patriotism, the desire to develop or to furnish a sufficient supply of sardines to keep the factory in operation during the season, even against the temptation of high prices which might from time to time be offered by the canners elsewhere. Some efforts to establish sardine canneries on the mainland of Charlotte county have not been successful; in some cases because there was lack of skilled management, in others because the plans at the outset were too ambitious. But there are several successful sardine canneries in Charlotte county, and the output of the five canneries during an average season is valued at between $400,000 and $500,000, a valuation based on very conservative prices.

Lobster fishing is a staple industry of Grand Manan, and the value of the catch has in the last year or so exceeded $100,000. The open season for lobsters extends from November 15 to June 15, and the fishing is mostly carried on in the winter months, when there is not much opportunity for other kinds of fishing. Now that most of the fishermen own motor boats, lobstering is neither so arduous or hazardous as it used to be, and owing to high prices, considering the time actually devoted to it. Sometimes lobster fishermen receive $50 or more for a day's work. But balanced against an occasional very profitable day are many days when the fishermen have little luck, and also many days when it is impossible to fish at all. Then, too, the winter storms do damage to traps and gear which often takes the cream off the season's earnings.

According to Inspector Calder, the present size limit, 3¾ inches length of carapace, which was put into effect in 1911, has done wonders for the lobster fishery in this district. Formerly there were three lobster canneries on the Island, but these have not been in operation for the last few years. As the fisherman now has no market for small lobsters, he returns any he catches to the sea, and gives them a chance to grow to full size, when they are worth much more. Scott Guptill also added his testimony to the value of the present size limit in conversation with the writer, and declared that the fishermen generally were strongly in favor of the existing regulations because the returns from the catch have shown a very considerable increase in the last few years. "Our fishermen, generally speaking, have realized the wisdom of strictly observing the lobster regulations," said Mr. Guptill. "For the kind of lobster a factory would use they would get about four cents; left in the sea, the same lobster next year is worth 20 and sometimes 30 cents. Lobstering is one of our most important industries, and it will grow in value every year, because prices are bound to advance."

"Lobsters," says Inspector Calder, "may be compared with our domestic animals. They are hatched and reared, live and die right off our own shores, and are, therefore, the particular wards of the department of fisheries." And the inspector points out that with the increased size limit the value of the lobster catch of his district more than doubled in two years. This fact would seem to indicate that with proper protection the danger of depleting the lobster fishery is not formidable, and should be of interest to fishermen in other districts where there are complaints that the fishery is being ruined. There are no lobster hatcheries on Grand Manan or in part of Charlotte or St. John counties, but probably if one or more were established in this district there might be a further improvement in this fishery.

The Grand Manan herring fisheries yield a larger value than the lobster fishery does, though probably for the amount of capital and labor involved the returns are not so profitable. The smoked herring industry of the Island has recently attained considerable proportions, and the high prices which have prevailed for this commodity recently will no doubt stimulate a further development of the industry. One advantage of this industry is that it gives a good deal of employment to shore labor, and merchants and business men of the Island are seeking to encourage it, because it helps to promote the general progress and prosperity of the island. This spring, Grand Manan sent a few vessels to the Magdalens to procure herring for smoking. Usually the herring do not strike in to Grand Manan till August. After their appearance in August herrings frequent the waters around the Island till December, but there are not facilities for handling

large quantities of either the large herring or the sardines, and the waste is great. The pickled herring industry is still important, but is said to be declining in value. Some doubt exists as to whether the Grand Manan herring are adapted to the Scotch method of curing.

A cold storage plant would no doubt prove a boon to the fisheries of the Island generally, and considering the liberal subsidy allowed by the Federal government, it is rather a source of wonder that some of the enterprising men there have not made a move to establish a cold storage plant. At present some of the wealthy men of the Island are going in for fox farming, so probably it may be some time before they will take up the project of securing a cold storage plant. Possibly there might be some question of a cold storage plant on the Island paying directly, but it would no doubt help the fishing industry generally. Under present conditions, both lobster and line fishermen are frequently handicapped by lack of bait in the spring. With a cold storage plant hundreds of tons of herring could be caught in season and stored away for bait, to be sold to local fishermen or to fishermen in other places. Nearly a hundred Lunenburg and American fishing vessels were lying idle in Canso waiting for bait for weeks this spring, the ice preventing them getting to the Magdalens. Last summer, American fishing vessels were paying at times as high as $6.00 a barrel for herring for bait.

Other fish taken off the shores of Grand Manan are cod, pollock, haddock, hake, cusk, mackerel, jack shad, and halibut. The mackerel are generally small, but are much esteemed on account of their flavor. Line fishing is carried on from the northern part of the island, principally from North Head and Castalia, but is not pursued on a very extensive scale. Line fishing is more of a gamble than weir fishing, and the returns vary greatly. Sometimes the line fishermen make as high as $1.000 for the season; at others they go as low as $200. However, they generally make good wages for the time they work. This spring the line fishermen at North Head were reported to be averaging 6 quintals a boat, and as they were receiving $3 a quintal for their fish landed fresh, each boat was making $18 a day, or $9.00 per man. The men are not at line fishing all the time. There is a good deal of fertile land on the Island, and many fishermen do a little farming.

Grand Manan at the last census had a population of 2.444. According to the last available returns which are over a year old, the vessels owned on the Island numbered 59, with a tonnage of 1,015, valued at $37,500 and employing 168 men. Gasoline boats numbered 151, valued at $49,000; sail boats numbered 367, valued at $12,000. There were 431 smoke and fish houses, valued a $167,000, and 96 piers and wharves, valued at $85.500. Number of seines was 59, valued at $11.400. Number of lobster traps 13,800, valued at $13.800. Trawls 104, valued at $2,080; weirs 59, valued at $86,000; gill nets 570, valued at $5,700; dip nets 300, valued at $4,500; hand lines 1.110, valued at $1.110; freezers and ice houses 1, valued at $500. The number of persons employed in fish houses was 380. Motor boats used by weir fishermen range from 12 to 20 tons.

There is no doubt that the fishermen of Grand Manan generally have attained a high degree of independence and prosperity as fishing communities go. Last year they had probably the most successful year in the history of the island, and everybody made good money. Inspector Calder declares that the possibilities of the further development of the fisheries there are great, and no doubt the success which has attended recent operations will awaken more interest in new opportunities. All around the Island are great beds of clams, but little has been done to utilize them. Inspector Calder believes a factory for canning clams established at Woodwards Cove or some other point would be able to do a big and profitable business.

When the fishing is dull, the fishermen can make money gathering dulse, which grows around the island and the small neighboring islands in immense quantities. At present this sea food, which is regarded as a great delicacy by many people, is shipped to St. John or other cities, and placed on the market in a condition about as attractive as a bale of hay. Some day some enterprising party will realize the commercial possibilities of the immense quantities of dulse around Grand Manan. Put up in attractive packages, tied with a pink ribbon, and advertised, it should command a ready sale. Many girls prefer dulse to bonbons. Whether there is any connection between a diet of dulse and the rosy complexions of the girls of Grand Manan is probably a debatable question, but it is as nutritious and as healthy as many patent breakfast foods, whose wonder working properties have been advertised so freely.

Like practically all members of the fishing fraternity, the folk of Grand Manan are noted for their hospitality. William McLean, school inspector for St. John and Carlotte County, who visits the Island frequently, is an enthusiastic admirer of the character of its people. "All the fishermen in my two counties are very hospitable," he said to me: "but in no place am I made to feel so much at home as on Grand Manan. Most of the fishermen in my district make good money, and they are very generous towards their schools, and exhibit a keen interest in everything pertaining to the education of their children. If I only had to deal with fishing communities I would have little to worry me. When I visit a school on Grand Manan, they hoist a flag, and the fishermen generally stop work and come flocking in from the sea or wherever they are to hold a school meeting. If I want any improvement made in the schools, I don't have to argue about it: I simply make a suggestion and it is as good as done. Some time ago fire destroyed a large portion of the village of North Head, including the school house. When I went down there about a week afterwards I though I would find the people discouraged and disinclined to think about rebuilding the school for some time, but they promptly called a school meeting, and with a celerity which took my breath away, unanimously voted $7,-000 for a new school house—enough to put up a very fine school for the size of the place. That is typical of the spirit of the people of Grand Manan."

LISBON FISH MARKET

(Special to Canadian Fisherman.)

The trade in salt and dried fish in the Lisbon district is practically confined to the importation and sale of "bacalhau" or dried and salted cod. The wholesale prices current at the end of April were:—

Old cod, 77s. to 78s. per 100 kilos, c.i.f.

New cod, 67s. to 68s., ditto.

The Packing of Fish

By C. D. CLIFFE.

Foodstuffs of all descriptions that are imported into Canada are invariably packed in excellent condition. This is especially applicable to the fish from foreign and British countries. The tins, kegs and barrels that contain fish, no matter what variety, are unquestionably the height of perfection. This subject received a great deal of attention at the last annual meeting of the Maritime Board of Trade held in Newcastle, N. B. One of the speakers from Cape Breton dealt with these notable facts regarding the packing of fish. He dwelt upon the French and Dutch sardines, the Scotch and Dutch herrings, also the Norwegian mackerel, accentuating the fine looking packages both barrels and tins which were so noticeable wherever these goods were marketed. In fact he gave the Boston market as illustration where he had seen the Canadian mackerel admired for its excellent quality and yet the buyers preferred the finely packed Norwegian barrels owing largely to the packing.

There are firms in Europe which have been in the fish business for centuries and they have never sacrificed quality to cheapness. Their experience in the art of canning and packing has long since tended towards perfection. In no case are the "Just as good" substitutes, though not so costly as the materials used, adopted for the sake of profit.

The firms name as a result is an absolute guarantee of quality;the worth of the product is admitted by the name. "Delory" on a sardine means purity, cleanness, best of olive oil and security in packing.

This is not condemning all packers because we have some quite as good as any in the world. There are exceptions and in most cases it is individuals to whom we have reference who are careless or inclined to resort to fraud in order to make profit. Often the carelessness is glaring and foolish and one wonders how such stupidity could exist in otherwise good business workers. William Wakeham, M.D., Inspector of Fisheries recently reported to the Dominion government on this matter. He referred to the fisheries in the Gulf of St. Lawrence. From Cape Rosier to Matane he said there was a big catch of herring, especially this last year. He considered the Quebec herring quite as good as any taken on the Scotch coast or even Dutch or Norwegian. Yet owing to the poor packing these fish were compelled to take second place and the market was limited, while the return was notably insignificant. Who is the real sufferer? Of course the poor fisherman.

The herring are placed in common, soft wood barrels held together by soft wooden hoops, loose generally. The barrels will not only not stand handling but will not hold the pickle. Much of the pack therefore gets rusty and has to be thrown away by the buyer. The inspector makes especial emphasis on the fact that the fishermen seem so unwilling to learn the lessons so severely taught. The careless curing and packing is giving a black eye to our best heritage of the sea. Strict inspection of the packing would be a sterling remedy. Quebec herring should not require this inspection because there is little doubt that it is able to hold its own against the world provided it is carefully cured and packed. The scorn with which it is looked upon by buyer would soon melt into praise.

Dr. Wakehams report tells its own story and should be timely warning to the Quebec and Maritime fishermen.

THE HERRING FISHING INDUSTRY IN EASTERN NOVA SCOTIA

By E. N. Parker.

The fishermen in this part of Nova Scotia are taking great interest in Hon. J. D. Hazen's bill respecting the inspection of pickled fish, and every man connected with the industry is greatly in favor of the bill.

One is accustomed to hear complaints about pickled herring, and the blame is always laid on the fisherman. But the average fisherman would like to put his fish up in good packages and also takes pride in having his fish well cured.

In the past years the man that took good care of his fish and paid an extra price for his barrels received no more than the man that used cheap, leaky barrels, and packed his fish without any regard to quality.

Halifax was the principal market, and most of the herring was shipped there by schooner, perhaps one schooner carrying the catch of a dozen fishermen, each man having his barrels marked.

At the wharf in Halifax a few barrels from each lot would be opened and an average price paid. The man with good fish not receiving a cent more than the man with poor ones, and the man with two hundred pounds in his barrel only getting the same as the man with one hundred and fifty.

This naturally put the quality of herring very low. Low enough to cause a Boston fish dealer to remark that the most degraded nigger in the West Indies would turn up his nose if you mentioned a Nova Scotia herring to him.

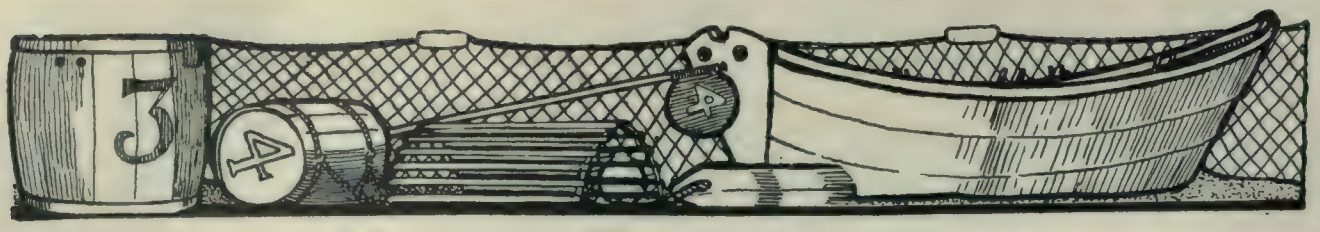
A visit to almost any country store will show why more herring are not used. The dealer will get a barrel of herring from the jobber. The package is not strong enough to stand shipping and the barrel arrives at the store dry. The dealer is not a good cooper, and does not understand the art of pickling. After a few sales he finds the balance of the fish getting rusty, and not fit for sale. He has lost money on herring, and probably will not handle them again.

Herring are plentiful on this shore, and with inspection regarding their quality, weight, and package, the industry would soon be a very important one.

TO INVESTIGATE FISHERIES OF JAMES AND HUDSON BAY

Following up the announcement made some time ago that an investigation would be made of the fisheries on Hudson Bay as well as of those on James Bay, to determine their commercial value, arrangements have been made to send out at once three parties under experienced and competent men. Two of these parties will go overland from Cochrane. One of the overland parties will investigate the fisheries of the rivers and shores on the west side of James Bay and Hudson Bay and the other will carry out the same work on the east side.

To investigate the deep-sea fisheries the schooner Burley, with the third party, will leave for Hudson Bay as sonn as navigation in the straits is open. The party for the east side work will be in charge of J. E. Melville, of Edmonton, a member of the fisheries board; while that for the west side work will be under A. R. M. Lower, a graduate of Toronto University, who has had considerable experience in the north country. The deep-sea fishery investigation will be conducted by Napoleon A. Comeau, who has been in the Fisheries Department for many years engaged in this work on the Gulf of St. Lawrence.



THE ATLANTIC FISHERIES

YARMOUTH, N.S.

(From Our Special Correspondent.)

May has been a fairly busy month in Yarmouth. True it has had its stormy days, but on the whole the weather has been favorable to the fishermen. We have not had the destructive storms like those which bothered us during the preceding months, or even like those of May of last year when the mackerel traps were destroyed almost as soon as they were put out, and there has been, in conseuence, little if any loss of gear. All branches of the industry have had their quota of attention and practically all have met with more or less success. Fish have been fairly plentiful within but a few miles of the coast and so far dogfish —that great pest of the fishermen—have not put in their appearance in any great quantity. All the local craft—with but few exceptions—are in commission, but still there is room for dozens of others. Quite a number more schooners to carry from eight to twenty men could find steady employment out of this port with a cash market in which to dispose of their catches. It is astonishing what an insatiable appetite for fresh fish the United States market has; the thousands of dollars' worth shipped from this port four times a week are lost as soon as they get to the other side. Yarmouth has the most advantageous position in Canada for this business, and a population ten times as large as it at present has could make comfortable and happy homes right here. But the fresh fish business as carried on here, is one, above all others, which requires close attention if one is to be successful at it, and I find in my daily journeys along the water front that the only "kickers" are those who allow their boats to remain tied up at the wharves because they think "it's coming on a blow" or else that "the fog will shut down."

The outstanding feature of the month, of course, has been the opening of the mackerel fishing. Owing to bad weather the first part of the month, the traps were not in readiness as early as usual. Private advices told of the first mackerel—two tinkers—being taken off Chatham, Mass., on May 1st, and judging from former years, it was thought they would strike here about May 8th. The traps, however, were not ready to purse before the 15th, and it was the 18th before the Sandford trap took the first fish on this coast—and it was a No. 1. On the 20th the Cranberry Head trap took three, and the Sandford trap eight. They continued taking a few a day until the 25th when they made the first big stop—Cranberry Head taking forty barrels, Sandford thirty barrels and Byrns Point fifty barrels. The same day the weir at Deep Cove Island took 1,200 fine large fish.

On the 26th and 27th they took large catches which seemed to be the last of the first run, as the traps have only taken a few barrels a day since. The body of the fish moved to the eastward and large numbers were taken around Cape Sable, the local coasting steamers bringing large quantities here for shipment.

Another feature is the close of the lobster season, which ends to-night (May 30th). Three days' extension has been allowed the fishermen to get their traps out of the water and to enable them to clean up their catches. The last shipment must be made on Wednesday, June 3rd. This applies to the district between the Yarmouth County Line and Halifax. Of course lobsters will still be shipped from Yarmouth coming from St. Mary's Bay and the Bay of Fundy for some few days yet. The figures for the complete shipments will not be available before Wednesday evening, hence will have to be included in my next letter, but on the whole the catch has been a large one.

During the month two sturgeon—an exceptionally rare fish in these waters—have been shipped from here. They were both taken in the Tusket river and in the export papers were valued at the nominal price of five dollars each. A half-barrel of scallops is also an unusual shipment from this port, in fact I do not remember ever seeing "scallops" on the clearance papers of the steamers before.

Shad, which have been somewhat of a luxury for some years past, have been fairly plentiful this season retailing at 35 cents each. None have been shipped —the local market having been fully able to take care of all that offered.

Gaspereaux, or "kayaks" as they are locally called, have also been very plentiful in all the tidal rivers and streams. They have been used very largely for bait.

May is the month of all months in which the fresh water fishing in this county vies with the sea fishing for supremacy. If we figure the actual value of the fish caught with that of the sea fish, the amount would look very small, but if we compare the amounts spent in capturing the fish, pro rata, the balance would be in favor of the inland fisheries. A large number of parties of American anglers—and a great many of our own boys, who have settled across the line—plan on a week or two around the lakes and streams of this county, and dozens of them have been here during the month. These various parties leave thousands of dollars here, and if they do not get their money's worth in fish they undoubtedly do in health and recreation.

Henry A. Amero has been the principal buyer during the month, but perhaps that is to be expected as he is the only dealer here who owns and operates his own vessels. The Digby fleet is still fishing out of its home port, and it is only occasionally they come in here to sell at this season, although both the Dorothy M. Smart and the Dorothy G. Snow have sold here during the monh. The Myrtle L. is shacking and has disposed of several fares here, and the Curlew and Cora May, of Westport and Freeport respectively, sell most of their catches here—principally to the Consumers' Fish Company. Both the Consumers' and Amero will be up against more opposition on and after Monday (June 1st), as the Gateway Fish Company starts operations on that day. This company has been slow about get-

ting to work, but it has been very carefully handled and financed, and to all appearances is starting on a good foundation. They are going into all branches of the business—not fresh fish alone—and have adopted and copyrighted a number of brands, as follows: Gateway Brand Boneless Cod, Gateway Brand Boneless Haddock, Gateway Brand Boneless Fish, Yarmouth Bloaters, Yarmouth Boneless Herring, Yarmouth Shredded Pure Cod, Yarmouth Brand Smoked Fillets of Cod, Yarmouth Booster Brand Pickled Fish, Markland Brand Fish Marrow, Bunker's Brand Boneless Fish, Gateway Brand Salt Cod, Gateway Brand Finnan Haddie.

The good prices which have prevailed during the last two months at least have caused a great stirring up of old bones. Any time during the past few years a trip along the water front would have revealed boats and small vessels in all stages of old age and neglect, but this spring it is doubtful if any could be found anywhere around the harbor. They have all been repaired and put into commission. One or two were sold at very low figures as the owners had condemned them years ago, but there is still life in them. Several have paid for themselves on the first trip.

Among the vessels which have gone into commission this month have been the schooner Mildred P., owned by Hugh McManus, with Joseph Muise as skipper; the Dandy, formerly of W. A. Killam's fleet, which has been purchased by C. J. O'Hanley; the Mabel A., another of the former Killam fleet, purchased by Mr. Delamere, and a large sloop which has been laid up on Sand Beach for some years was purchased from Jethro McGray by Leander Robicheau. The former American schooner James R. Clark which was purchased last month by Captain Anderson, of Clark's Harbor, has been put under British register, repaired, and sold to Wedgeport parties who will use her British register, repaired, and sold to Wedgeport parties who will use her in the fisheries. The former American sloop Viola, now the British sloop Viola A. is now on her first fishing trip out of this port.

Henry Amero made his first big shipment of pickled fish to Gloucester to-day in the schooner Lavinine. The items in the cargo, which I am giving because they are not included in the regular "export" list which is given below, are: Cusk, 20,850 pounds; large, 3,400 pounds; cod, 27,365 pounds; medium, 28,125 pounds; scrod, 7,300 pounds; hake, 4,400 pounds; pollock, 1,600 pounds; haddock, 4,350 pounds; hake sounds, 321 pounds.

H. and N. B. Lewis have placed their schooner the Emelien Burk, in commission. She was originally built for a fisherman but the last few years has been coasting.

A boom is promised our neighboring community of Lower East Pubnico this season. The American firm of Cunningham and Thompson will establish a plant there for the purchasing of fresh fish at Gloucester prices minus the transportation charges to that port. To receive spot cash for their labor every week will mean quite an innovation for the crews of the ten vessels that sail from Pubnico, for in the past a settlement has always been postponed until late in the season.

The only casualty in this county this month was the loss of the Shelburne schooner Alice Gertrude which parted her cable at Seal Island on Sunday the 23rd, and was driven ashore becoming a total loss. She was 82 tons and was owned by Capt. W. I. Farquhar and others, of Shelburne.

The Portland, Maine, schooner Marion E. Turner, which in the fall and winter made Yarmouth her headquarters, was lost on Cusk Ledges, off Shelburne, on the 22nd, and her crew were sent home by way of this port.

The exports during the month were:

Live Lobsters, crates	7,044
Fresh Fish,, cases	12
Dry Fish, drums	1,057
Boneless Fish, boxes	2,045
Fresh Halibut, cases	275
Fresh Salmon, boxes	133
Clams, barrels	86
Hake Sounds, bags	7
Fish Waste, barrels	135
Scallops, barrels	½
Canned Lobster, cases	1,392
Salt Herring, barrels	48
Pickled Herring, barrels	168
Periwinkles, barrels	23
Sturgeon	2
Finnan Haddies, boxes	4
Dry Pollock, packages	6
Fresh Mackerel, barrels	356
Bloaters, boxes	773
Fish Skins, barrels	576

To London:—
636 cases Canned Lobster
To Hamburg:—
496 cases Canned Lobster.
To Porto Rico:—
70 drums Dry Salt Fish
To Cuba:—
40 drums Dry Salt Fish
To Port Limon:—
45 drums Dry Salt Fish.

DIGBY, N. S.

(From Our Special Correspondent).

Digby, May 31.—The following fish have been landed at Digby this month as reported by the wholesale fish firms: Maritime Fish Corporation, 178,625 lbs. of Haddoc, 170,395 lbs. of Cod, 22,846 lbs. of hake, 5,225 lbs. of Halibut, 74,500 lbs. of Cusk, 18,985 lbs. of Pollock; D. Sproule & Co., 29,824 lbs. of mixed fish; J. E. Snow, 1,800 lbs. of cod, 4,805 lbs. of haddock, 26,970 lbs. of mixed fish; Nova Scotia Fish Co., 12,300 lbs. of cod, 1,141 lbs. of Halibut, 6,200 lbs. of mixed fish.

The Schr. Snow Maiden (formerly Haines Bros.) has carried two trips this month of dried fish and fish skins to Vinal Haven shipped by Digby's wholesale fish firms and purchased by the Lane Libbey Fisheries Company.

Schr. Albert J. Lutz, Capt. John Apt. sailed Wednesday May 6th, for an Anticosti halibut trip.

D. Sproule & Company's auxiliary schr. Brittania is engaged in bringing live lobsters from the head waters of the Bay of Fundy to Digby for shipment to the American market.

Large quantities of Turk's Island salt, which was landed at Yarmouth this month are being shipped in smaller crafts to Tiverton, Freeport, Westport and other ports down the Bay. Evan E. Dunn, Digby's well known boat builder, is turning out a number of handsome motor boats for the fisherman. The last two launched were for Enoch Campbell, of Culloden, and Capt. Joseph E. Snow, of Digby.

The Freeport auxiliary schr. Cora Gertie, Capt. M. G. Crocker, is making regular trips from down the Bay ports to Digby bringing fresh fish for the Maritime Fish Corporation. The schooner Dorothy G. Snow, Capt. Snow, arrived here Saturday, May 16, with 106,000 lbs. of fresh fish, which were purchased by theMaritime Fish Corporation. This high line skipper has retired from fishing for the present and will devote a portion of his time to his farm and the building of a new house on his Lighthouse Road property. The schr. Dorothy G. Snow left Digby again on Thursday the 20th, in her Summer rig and in charge of Capt. Ernest Firth.

Digby's first mackerel of the season was caught in the Smith's Cove and Joggin weirs on Wednesday the 27th. Some measured 22 inches in length.

Digby's fresh water fishermen are catching some beautiful trout. Mr. G. A. Vye, Digby's street and water superintendent, is high line among the salmon "sports," His catches were made in the Annapolis and Salmon Rivers.

The yachting season has opened at Digby with Mr. Leslie Hamilton as caretaker of the Western Nova Stotia Yacht Club house and landing. Another extension has been built to the Club slip. This organization is in a prosperious condition and its members are looking forward to a pleasent season on the beautiful waters of Digby Basin and vicinity.

CANSO, N. S.

(From Our Special Correspondent).

The month of May brought with it better weather conditions, both in point of warmth and wind, and the lobster fishermen in consequence have been faring a good deal better. The catch up-to-date, however, is much behind that of other years. The exceedingly high price paid for these valuable shellfish is the only thing making the lobstering on this section of the coast at all worth the time and expense involved in its pursuit. The time of writing is about the height af the season as a rule, so that the prospects for an average season are rather remote. The drift ice destroyed a few traps during the early part of the month.

On May 15th Boudreau and Rhynold's trap at White Point rewarded its owners with a fine catch of fish, chiefly cod and haddock. It was filled in a very few hours after being put out for the season's fishing. They weighed off 18,000 lbs., which the North Atlantic Fisheries bought at 3 cents. Another haul, about equally as good, was made during the present week.

On May 7th the American schooner Lilian, Capt. Morrissey, arrived in port with flag half-masted for the loss of a young man of the crew named Thomas, a native of Cape Negro, who was knocked overboard in some way after leaving Gloucester. On Saturday of same week, when leaving here for the Strait of Canso, Capt. Morrissey had the further misfortune of running ashore while passing through the northern entrance of the harbor. At high tide that night the vessel was pulled off in a somewhat damaged condition, by the S. S. Scotia.

Capt. Wylie Rudolph, in the Squanto, while in Hawkesbury during the ice-jam, met with a regrettable accident. The explosion of a lamp caused a fire in the cabin, in which two men were rather seriously burnt and Capt. Rudolph lost considerable clothes and fittings. Many Cansonians felt particularly sorry for Capt. Rudolph's loss, as he is a Canso boy.

On May 19th the Ella M. Rudolph, Capt. Charles Rudolph, of Lockeport, landed about 3,000 lbs. of halibut at the Maritime Fish Corporation's plant here.

A few enterprising shore boats have been trying the off-shore grounds recently, but the results have not been very encouraging.

ST. JOHN, N. B.

(From Our Special Correspondent).

Salt fish have been coming into St. John fairly freely of late from Nova Scotia Bay ports and from Grand Manan, and most of the wholesalers have good stocks in hand. Prices, however, appear firm. A slight decrease from the present high levels in some lines is probable, but any decline of importance is not expected. Wholesalers here count themselves lucky in getting fair supplies, in view of the general situation in regard to salt fish. They have been paying high prices ex-vessel, and this has attracted several cargoes here from Bay ports, where the fishermen have recently made some good catches. Owing to the fact that a large fleet of bankers was held up for several weeks at Canso this spring waiting for bait, and the circumstance that many shore fishermen of Nova Scotia who formerly salted their catches can now sell to fresh fish firms supplying the American market, the prospects of a big increase in the supply of salt fish in the near future is not regarded as bright.

Wholesale quotations here are:—

Small Dry cod	$5.00	to	$5.25
Medium dry cod	7.00	to	7.25
Pollock	0.00	to	4.00
Grand Manan herring (brs.)	0.00	to	5.00
Half brls.	0.00	to	3.25
Smoked herring	0.14	to	0.15
Fresh haddock, per lb.	0.03½	to	0.04
Pickled shad half (brls.)	8.00	to	12.00
Fresh cod (per lb.)	0.03½	to	0.04
Halibut (per lb.)	0.10	to	0.15
Swordfish (per lb.)	0.12	to	0.13
Bloaters (per box)	0.80	to	0.90
Kippered herring (per doz.)	0.00	to	0.90

Carrying coals to Newcastle. St. John during the past month has shipped a good deal of fish to Digby and Grand Manan. The shipments have consisted of Gaspereaux, destined to serve as bait. Harbor fishermen have made fair catches of Gaspereaux both in weirs and nets.

The season for shad and salmon has opened, and in a few days fair catches have been made in the harbor and up the river.

The fresh fish market has been fairly well served during the past month. Lobsters came in freely. Some smelts have been on the market recently.

ROSE BAY AND RIVERPORT, N. S.

(From Our Special Correspondent).

All of our vessels sailed across from the Strait of Canso around the 20th of May. As this is a late date for getting across and the spring as yet has been unfair, the majority of them will take two baitings if the weather permits.

The lobster fishermen are doing poorly on account of the weather and scarcity of lobsters. The price of the small ones is six cents per lb. and large ones fifteen cents apiece. All the fishermen say that the run this year is smaller than previous years.

Our great marine Dr., S. S. Slaughenwhite, of Rose Bay, who had taken a great interest in the fisheries of this county, has recently sold his practice to Dr. H. G. Grant.

The fishermen are all sorry that he is going to leave, as the place loses a well experienced doctor.

ST. JOHN'S, N. F.

Fish and Oil.

Saturday, May 30th.

Large, Medium and Small Merchantable	$6.50 to 6.80
Large, Medium and Small Madeira	6.30 to 6.50
Labrador	none
Labrador, Shore Cured	none
Large and Small West India	3.50 to 4.00
Haddock, per qtl.	3.50
Herring, per brl., No. 1, large	3.00 to 3.20
Herring, per brl., No. 1, medium	2.60 to 2.75
Salmon, No. 1, large, per tre.	16.00
Salmon, No. 1, small, per tre.	12.00
Lobsters, per case, No. 1, pound tins	22.50
Cod oil, per tun, h.w. pkg.	87.00
Cod oil, per tun, s.w. pkg.	81.00

NEW BRUNSWICK NOTES

(From Our Special Correspondent).

Hon. J. D. Hazen has been selected Honorary President of the first Fisheries Protective Union formed in New Brunswick, that at Lorneville. This action was taken as a mark of appreciation for what the Minister is doing to advance the interests of the fisheries.

According to reports from Grand Manan, pollock fishing has been unusually good during the past month. Some reports are to the effect that pollock are more plentiful about the Island than they have been for twenty years past. This reappearance of pollock in large numbers is a matter of interest. Only two years ago some fishermen were expressing the opinion that pollock fishing at Grand Manan would be ruined in a few years. This spring some fishermen operating around Grand Manan have been using dynamite to capture pollock . One man lost his hand by a premature explosion of a stick of dynamite. Fishery protection cruiser Curlew was sent to Grand Manan to put a stop to the use of dynamite.

Line fishermen on Grand Manan made some good catches of cod as well as pollock last month. In the early part of the line fishing season operations were restricted by lack of bait, but gaspereaux appeared on the coast of St. John county during the latter part of April and solved the bait problem to some extent. Many boats on the northern part of the Island caught six quintals a day, and the cod when landed brought $3 a quintal.

Not for years has the sardine season been so backward. Whether or not the weather has anything to do with the movements of sardine herring, it may be worth noting that the weather has been unusually cold and gloomy for May. Movements of the sardine schools have been erratic. They have struck in at some points one day and disappeared the next. Very profitable catches have been reported at different places for a day or so. One weir is reported to have stocked $650 in a single day. At Oak Bay some weirs caught over $300 worth in a single tide. Good catches have occasionally been made at Bliss Harbor, Letang and Back Bay. But taken as a whole, the catch has been poor. Most of the sardine canneries at the different points in Charlotte county, as well as Lubec and Eastport in Maine, have been ready for business for some time. Lubec factories were paying $25 a hogshead for sardines at the opening of the season. During the month of May there have been reports that $15 was being paid at the weirs in some places. But about the 20th of May it was reported that Connors Bros., of Black's Harbor, had paid $25 for small lots. What these prices mean to the fisherman may be judged from the fact that at the opening of the season last year they were content to accept $6; though, of course, high prices don't really mean anything if you have no fish to sell. Probably the canners have laid up trouble for themselves by paying such high prices. Considering the backward nature of the spring the weir-fishermen are expecting good catches of sardines later on, and will be disposed to stand out for good prices. It is not so long ago that the weir-fishermen sold sardines for $2.00 a hogshead and made money.

For the benefit of anybody not acquainted with the sardine fisheries who may read these notes, it may be observed that a hogshead represents 5 barrels. It may also be observed that the sardine season in Charlotte and St. John counties begins earlier than it does at Grand Manan, though that Island is situated not far off the coast of Charlotte county. Furthermore, it may be observed that the Dominion Department of Fisheries, in making up its estimate of the value of the sardine fisheries, figures on a price of $1.00 a barrel or $5 a hogshead, which is lower than the average price for years past.

BONELESS CODFISH

(Maritime Fish Corporation, Ltd.)

Halifax, 1 lb. boxes, crates, 12 to crate (per crate)	6.00
Halifax, 1 lb. boxes, crates, 24 to crate (per crate)	3.60
Halifax Shredded, cases, 24 to case (per case)	1.80
Acadia, 2 lb. boxes, crates, 24 to crate (per crate)	6.00
Acadia, 2 lb. boxes, crates, 12 to crate (per crate)	3.00
Acadia Tablets, 1 lb. package, cases, 20 to case (per case)	2.20
Acadia English Strips, 30 lbs., cases (per case)	3.60
Cod its, 3 lb. boxes, crates, 12 to crate (per lb.)	.08
Cod Bits (bulk), 25 lbs., cases (per lb.)	.07
Skinless Fish, 100 lbs., cases (per lb.)	.07½
Skinless Fish, 50 lbs., cases (per lb.)	.07½
Bluenose Steak (assorted), 1 and 2 lb. cases, 40 lbs. to case (per lb.)	.08½
Bluenose Steak (assorted), 1 and 2 lbs., cases, 20 lbs. to case (per lb.)	.08½
Pilot Blocks (assorted), 1 and 2 lbs., cases, 20 lbs. to case (per lb.)	.07½
Pilot Loose (assorted), 25 lbs., cases (per lb.)	.07

LUNENBURG, N. S.

The Lunenburg fleet have been having a very discouraging and hard time of it this spring owing to the unprecedented blockade, which prevented them from getting to the Magdalen Islands for bait, where they generally go for their supplies after the spring opens. The Government kindly sent a steamer to Canso, where the greater part of the fleet were at anchor, to assist them in getting through the ice in order to reach their destination. After much difficulty they at last succeeded in getting over to the Magdalen Islands, where they all procured supplies of bait, and left for their usual fishing grounds at Cape North.

The supply of Caplin, on which they depend for bait

during the early summer, will likely be late there also, owing to the quantities of ice on the Newfoundland coast.

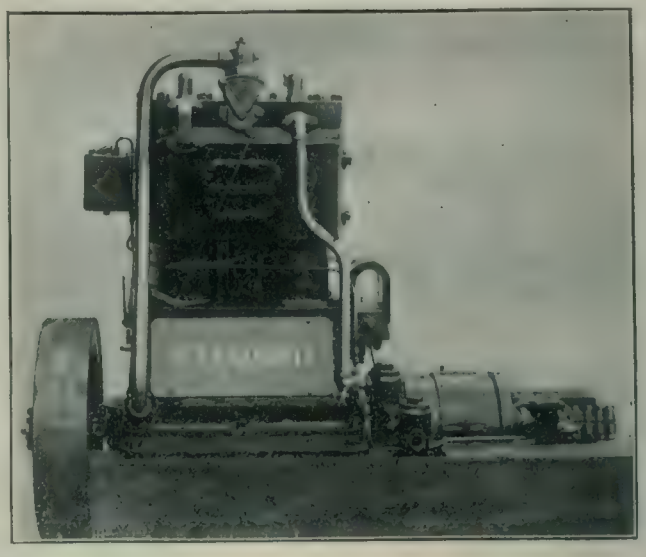
The early spring catches obtained off the frozen bait have all been disposed of at the highest prices ever before paid for fish in this market, the prices averaging about $7.50 for Cod and $5.50 for Haddock, which will help out that portion of the fleet which were fortunate enough to obtain them. The above prices cannot be expected to continue for the fish that have to arrive, as the Norwegian catch during the past season has been the largest on record, and when these fish are ready for market the foreign consuming markets will naturally be affected thereby.

STANDARD OIL ENGINES

The use of oil engines to-day has become so common that all big manufacturers are taxed to the utmost to meet the demand. One manufacturer, namely, The Standard Motor Construction Company of Jersey City, has been able to develop their engine to such an extent that it compares favorably in first cost with the general manufacture of gasolene engines. Their oil engine has all the necessary features to compare, such as low fuel fuel consumption, low first cost, etc.

Standard oil engines specially excel in sizes of 300 h.p. and below. This is an important fact, and it is generally known that a very small proportion of the engines are running enough hours during the year to make a saving in fuel which would offset the increased interest on the first cost of investment or the depreciation, etc. It is apparent, especially to the various owners, that the gasolene engine is much cheaper than the high priced oil engine and that oil engines at the same first cost as that of gasolene engines, while burning kerosene at 6 or 7 cents a gallon, is a very practical and economical proposition.

The Standard Oil Engine has the same flexibility and the same easy control as the Standard Gasolene Engine in all engine speeds and the same fuel economy. There are no hot bulbs and the engine may be started on gasolene or with a small torch or electric mat, only a few seconds running are required to get enough heat in the engine for running on kerosene. The same low tension and ignition exists in the Standard Oil Engine



as in the gasolene engine. These engnes are all put to the severest test, and in the shops of the company they are operated for a month and a half steadily before they are allowed to be disposedof. They work almost actual conditions found in all boats and every one of these results quoted are based on the most severe trials. The engine is being well received by experienced operators of boats and is considered as something entirely different from anything before placed on the market.

RAISING A BLOCKADE ON THE FRASER

A recent rock slide in the Fraser River at Hell Gate Canon increased the velocity of the stream to such an extent that the spawning salmon were unable to struggle past. Huge boulders were fished out by the air line shown, in order to clear the channel.

Pub. by courtesy of the Vancouver "Province."

THE PACIFIC FISHERIES

The Mosquito Fleet of the Pacific

By F. J. HAYWARD.

From Southern California to the most Northern villages of Alaska, the introduction of the gasoline engine has been responsible for each city, town and village having its own mosquito fleet. We all know from experience what sort of an animal the mosquito is and what its habits are. But its bad habits have not been used to find a name for this collection of fishing boats; merely its tendency to go about in flocks.

It corresponds to the Atlantic shore fisherman, whose vocation is quite different from the deep sea man. To a certain extent the shore fisherman fishes from hand to mouth. By this I mean that his daily catch is brought to his home and there either sold for local consumption, or else cured. The deep sea man's catch is brought to land when the vessel can hold no more or else when the length of the time the fish have been caught demands a return.

invariably collect at one place when in port, and give that part of the harbour quite a busy appearance. In Vancouver and British Columbia these small boats are usually on the "Columbia River" model. They are built with bow and stern alike when in the water. Of course since the advent of the gasoline engine, the stern has had to be adapted somewhat to suit the propeller. They also run from about 25-32 feet in length. In the case of those which fish around the mouth of the Fraser River, a small house is built in the bow. There the fishermen can shelter when on the grounds.

It is quite interesting to see the various devices of the Japanese fishermen. If time is no object to them, a "sculling" oar of their own invention is used on the port side near the stern. With this they jog along at their own pace. Others have long poles stretching from the rudder to the cabin in the bow. This will allow the crew of one man to steer and look after his engine at the same time. The object of standing in the bows of course being to look out for the innumerable snags that are floating around

Photo—Broadbridge. MOTOR BOATS AT SALMON CANNERY.

Except for the Halibut and Alaska cod which is caught up in the Behring Sea, all the fishing for local consumption on the Pacific is looked after by this mosquito fleet.

Like any other coast, the fishermen have adapted their boats to suit the weather conditions. They almost

these waters. Many of these boats also contain tanks amid-ships and in them are placed the cod alive. There is a doubtful benefit from a sanitary point of view, for it does not seem at all beneficial to the fish to be cooped up for hours in a crowded space.

During a time like August, 1913, which was a big

year for the Sockeye salmon, it was reckoned that there were fully a thousand of these boats operating from Steveston at the mouth of the Fraser. At 6 p.m., Sunday evening when the gun fired, the noise of the nets going overboard can be heard for miles. To look after these boats, the different canneries send out their own tenders, which are usually large power boats. These tenders collect the catch from the boats and give receipts accordingly. The same may be seen in the neighborhood of any cannery on the coast, but nowhere is the mosquito fleet so large as on the Fraser River, during a "run."

As to the fishermen themselves, it has been said that the Tower of Babel could not compare with them for diversity of language. This may be true in more than one sense, for many languages heard on the Fraser are new inventions since the time of the world's first sky-scraper. To mention a few, one can hear Italian, Greek, Siwash, French, Norwegian and English in its many forms. The last mentioned will contain the dialects of the Newfoundlanders, the Nova Scotians, the Irish, the Americans from the Atlantic and the various expressions used by the Old Countrymen, not excepting of course the London Cockney.

This mosquito fleet represents a very large industry and amount of capital. Almost every "old timer" in British Columbia has included fishing from one of these small boats amongst his most varied pursuits in quest of the wily dollar, usually in the olden days between periods of real estate booms. But now these boats are owned and operated by men who as a rule have followed the sea all their lives.

The boats fishing out of Vancouver, Victoria, Nanaimo and other such centres do not have the same weather conditions to contend with as obtains on the Atlantic. Vancouver Island forms a good shelter from the restless Pacific, allowing the fishermen to follow his calling all the year around and under most favorable circumstances. They are not free from blows by any means, still these are to be expected. Is not freedom from ice, snow and frost welcome to those who have all these to contend with on the Atlantic?

These "mosquito" fleets are interesting always, and are here to stay. With the development of the British Columbia fisheries as they should be, the number of these boats will be many time increased. The inventor of the internal combustion engine little realised what the world owes him. He has by his invention lessoned the hardships of the world's fishermen to an almost negligible degree compared to the old days.

PRINCE RUPERT NOTES.

(Special Correspondence)

Now that the Grand Trunk Pacific Railway will soon be open for through traffic Prince Rupert will soon be the centre of the Pacific halibut fisheries. This port is already getting a big share of the business and when shipments can be made over the railway to the eastern markets practically all the halibut will come to Prince Rupert. The port is two days nearer the fishing banks than any other shipping point.

A few days ago following the first favorable fishing weather the Canadian Fish and Cold Storage Co. took in 300,000 lbs. of fish in one day. This company has ten new boats including two trawlers fishing regularly.

The number of small independent fishing craft is rapidly increasing. Last year there was only half a dozen independent boats operating out of this port but htis year there are about twenty-five.

Recently the members of the Halibut Fishermen's Union and the Canadian Fish and Cold Storage Co. of Prince Rupert made an amicable agreement upon the division of the fish caught with trawlers. Where dory fishing is done each dory takes its own fish, the same arrangement that has been in force for some time. Where the long lines are used there are to be twelve fishermen or a boat and the catch is to be equally divided among the twelve at one and a quarter cents per pound. The captain does not share in the catch but one of the twelve fishermen acts as mate.

A local branch of the Halibut Fishermen's Union is about to be formed here. There are about 1500 members on the coast.

The salmon canneries along the B. C. coast are all busy getting ready for the canning season which opens on June 15. Many of the canneries are installing the new sanitary can lines this year. A few of the Canadian canneries used them last year and their success has induced others to use the new solderless can. On the Skeena river, where the B. C. Packers have four canneries the cans are all made at the central plant. By next year it is expected that every cannery on the coast will be using the new can.

The fisheries officers of District Number Two of the British Columbia fisheries report that all independent salmon fishing licenses set aside for white fishermen have been applied for. These licenses are for gill net fishing. Up until last year the Dominion Fisheries Department issued all salmon licences through the canneries. A fisherman had to be employed by a cannery before he could get a licence and he was bound to deliver his fish to the cannery which supplied the gear. In this district the Department limited the number of licences under the plea of conserving the industry. The Japanese through the canneries were thus enabled to get control of the fishing.

The object of independent licenses is to root out the Japanese. These licenses were first tried out last year. A number on each river were reserved for white men who were to own their own gear and be priviliged to sell their catch to any cannery. This was expected to attract white fishermen to the B. C. coast and encourage settlement on the valley lands. Unfortunately the politicians who planned the idea overlooked the important fact that while many white fishermen might immigrate to B. C. only those who where British born could fish. The licence regulations issue licenses only to British subjects.

Last year many of the independent licenses set aside for white men were not taken up and later were turned over to Japanese. This year all the independent licenses are applied for, but as an applicant no longer requires to own his own gear in order to get a license the applications in many instances are made by men who are not fishermen and do not intend to fish. The licenses are being peddled about the fish docks and settlements. In the meantime the department believes the independent license policy is a success because all the licences have been applied for. The probability is that before the season is over the canneries will be complaining that the alleged white fishermen have quit work and they are short of fishermen.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by London Fish Co.)

Smoked Fish.

	per lb.
Finnan Haddie, Atlantic 15's and 30's	.09
Fillets, Atlantic 15's	.10
Bloaters, Atlantic	.07
Bloaters, Local	.06
Kippers, Local	.06
Salmon	.14
Halibut	.11
Cod	.09
Kippered Salmon	.12
Kippered Halibut	.12
Kippered Black Cod	.12

Frozen Fish.

Salmon, Steelheads, dressed	.09
Salmon, Cohoes, dressed	.07
Salmon, Cohoes, round	.06
Salmon, Qualla, dressed	.05
Cod	.05
Halibut, Chicken and Medium	.05
Smelts, local	6-7
Soles	.06
Flounders	.03
Perch	.05
Herring, local	.03
Black Cod, Alaskan	.08
Mackerel, Eastern Shore	.12
Shad Roe, per pair	.20
Whiting	.03

Fresh Fish.

Salmon, Spring	8-10
Halibut	4-5
Cod	3-5
Smelts	.08
Herring	.03
Soles	.05
Whiting	.06
Skate	.03
Perch	.04
Rock Cod	.03
Red Cod	.03
Sea Bass	.04
Black Cod, Alaska	.08
Shad, Columbia River	.08
Sturgeon, Round	.10
Sturgeon, dressed heads off	.16

Pickled Fish.

Salmon (sides) barrel, 200-lb.	.10
Salmon Bellies	.12
Alaska Black Cod	.08
Eastern Dried Hake, per drum	7.50
Eastern Salt Cod (whole fish)	8-11
Pacific Salt Cod	.07
Mackerel, Atlantic specials, per barrel	27.00
Mackerel, Atlantic count, 190, per barrel	22.00
Mackerel, Irish, count 340, per barrel	20.00
Herring, large Eastern, per ½ bbl.	5.50
Herring, Holland mixers, 10 lb. kit	1.00
Herring, Holland milkers, 10 lb. kit	.90
Herring, local ..... per lb.	.07

Prepared Fish.

	Per lb.
Boneless Cod, Acadia, 2-lb. boxes	.14
" Acadia strips	.13½
" Acadia Tablets	.14
" Bluenose bricks, 1 and 2 lb.	.09½
" Pilot, do.	.08
" Nova Scotia-Turkey, 2-lb.	.07½
" Pacific	.09

Shell Fis.

Deep Sea Crabs (Boundary Bay) per doz.	1.00	1.20
Shrimps ..... per lb.	.08	.15
Prawns ..... per lb.	.15	.25
Clams ..... per lb.		.02
Clams, shelled ..... Gal.		1.25

Fresh Salmon

The weather of late has been extraordinarily warm and the result is that the mountains have lost their covering of snow. The heavy frosts caused by the melted snow has filled the rivers to such an extent that fishing has been difficult, and also the fish themselves scarce.

The consequence is that the local market will take all the Spring Salmon offering and at good prices. A few "Bluebacks" have been offered for sale, but these are not in quantities sufficiently large to take into consideration. Sportsmen have also caught a few "Steel heads" in the rivers.

Herring

These are now showing up again. Owing to the size of the fish, it looks as if outside of bait, kippering for the local trade, and later on dry salting, the market is limited. There is a law prohibiting the catching of these herring for fertilizing and oil rendering. The impression is here that it is better to find some use for these herring, which are in such vast shoals all over the coast, than to let them alone. The more strings a fisherman has to his bow the better. If he were allowed in between seasons to make oil out of the fish lying at his door almost, it would be to his betterment. There has been a demand of late for Herring Oil, so if the fish are good for nothing else, why not let the oil be made here?

Sturgeon

For the same reason that the salmon are scarce on the Fraser, Sturgeon are also slackening off. The retail stores have enough to give them the variety necessary in all up-to-date stores. It seems a pity that the Eastern and Middle West markets do not take more of these fish when they are offering. Perhaps they look on them as being a luxury.

Fish Oils

In former years quite a quantity of this was offering all over the coast. There were several refineries with fertilizing plants attached. At present about the only one to reckon with in B. C. is situated on the Fraser River close to Ladner. There one can get the old familiar smell during the salmon run, the heads, etc., being used to make the fertilizer and Salmon Oil. This latter is coming into use in the U. S. on a pretty large scale, as it has been found to be excellent for varnishes. It makes a very pretty coloured oil, is very elastic and is as near odorless as a fish oil can be.

The Indians of the Queen Charlotte Islands make Dogfish Oil from the large quantities abounding in their waters. On the Pacific there will be the same trouble with these as now is on the Atlantic. But an Indian is ever ingenious, and his paten hook is worth notice. It is made mainly of wood and when used for the halibut, has a projection that will not allow the hungry dogfish snatch the bait.

To date there has not been a large demand for the export of this oil, and what was made, was used by the

collieries on Vancouver Island. But with the increasing number of enquiries for this oil, it looks as if manumanufacture will be on a large scale in years to come. The Indians at Skidgate put up a very nice article, but want too much for their goods. 40c. per Imp. gal. comes to about 24s. per cwt. delivered in Europe, and this is costly for a fish oil. It was the intention of the B. C. Fisheries Co. to manufacture this on a large scale, but as they are no longer operating, we shall have to await the advent of some other concern.

Canned Salmon

	May 26th.
Sockeyes (Talls)	$ 7.50
" (Flats	8.60
" (Half Flats)	10.25
Cohoes (Talls)	4.50
Cohoes (Flats)	6.50
Pinks (Talls)	3.00
Pinks (Flats)	4.00

Comparing the above prices with those of the May issue, it will be seen that the advances are pretty sharp. It is not considered that prices will go much above these, but as the English buyers have been keeping after the goods and want them aa almost any price to fill orders, sales up to 175,000 cases are reported. These sales are, of course, for the coming pack. Of the cheaper grades, the market seems to be fairly firm.

At the above prices packers will make out on the right side and also the fishermen will obtain more than last year from the canneries. The pack being less than last year, it looks as if two years would about even up all round.

Trade enquiries from South Africa and the West Indies point to a feeling for direct buying. But until direst shipping is established, it does not look as if the buyers could do better by changing their present sources. These are English centres such as Liverpool and London and also New York. The large buyers in those cities enjoy very low freight rates, and with their larger purchasing powers can get prices that the smaller men cannot get. In fact, direct freights and cheap distribution make all the difference in C.I.F. prices.

Halibut

The month of April 25th to May 25th has seen some large arrivals of Halibut, and from the accompanying list will be seen both the Vancouver and Prince Rupert arrivals. This has naturally lowered the price somewhat, but the fishermen have reaped a harvest, as they are paid so much per pound irrespective of the market rulings.

The Canadian Fishing Co. Ltd.'s new boat, the "Knickerbocker," will be in commission this month, which will add still another vessel to the list. It is up to Canadians now to eat more fish.

Arrivals at Vancouver

	Lbs.
April 25th—W. No. I., Can. Fishing Co., Ltd.	22,000
May 1st—Celestial Empire, Do.	75,000
" 1st—Pescawha, Do.	50,000
" 2nd—W. No. I., Do.	20,000
" 7th—Emma H., Do.	37,000
" 7th—Flamingo, Do.	75,000
" 9th—Celestial Empire, Do.	110,000
" 9th—W. No. I., Do.	22,000
" 12th—B. C. P., B. C. Packers Assoc'n. (Stevenson)	90,000
" 14th—Victoria, Crown Fish Co.	8,000
" 16th—Eva Marie, Can. Fishing Co., Ltd.	30,000
" 17th—Pescawha, Do.	45,000
" 18th—Emma H., Do.	40,000
" 19th—Celestial Empire, Do.	145,000
" 19th—Roman, B. C. Packers Assoc'n. (Steveston)	90,000
" 18th—Flamingo, Can. Fishing Co., Ltd.	125,000
" 22nd—B. C. P., B. C. Packers Assoc'n. (Steveston)	50,000
" 22nd—Tuladi, Can. Fishing Co., Ltd.	12,000
" 24th—Kingfisher, New Eng. Fish Co.	120,000
	1,136,000

Arrivals at Prince Rupert

	Lbs.
April 25th—Chief Zibassa, Can. Fish & Cold Storage	50,000
" 25th—Andrew Kelly, Do.	60,000
" 26—Roosevelt, Skeena River Fisheries (Haysport)	50,000
" 29th—Carlotta G. Cox, Atlin Fisheries, Ltd. shipped to Can. Fishing Co., Ltd.	40,000
" 29th—Zorra, Atlin Fisheries, Ltd., shipped to Can. Fish. Co., Ltd.	13,000
May 1st—Borealis, Atlin Fisheries Co., shipped to Can. Fish Co., Ltd.	17,000
" 1st—Jas. Carruthers, Can. Fish & Cold Storage	100,000
" 2nd—G. E. Foster, Do.	70,000
" 2nd—Chief Zibassa, Do.	60,000
" 5th—Chief Skugaid, Do.	32,000
" 8th—Borealis, Atlin Fisheries, Ltd., shipped to Can. Fish Co., Ltd.	35,000
" 8th—Zorra, Do.	10,000
" 10th—Chief Zibassa, Can Fish & Cold Storage	57,000
" 13th—Chief Skugaid, Do.	88,000
" 15th—Jas. Carruthers, Do.	130,000
" 16th—Carotta G. Cox, Atlin Fisheries Ltd., shipped to Can. Fish Co.	90,000
" 16th—Geo. E. Foster, Can Fish & Cold Storage	118,000
" 17th—Zorra, Atlin Fisheries Ltd., shipped to Can. Fish Co., Ltd.	15,000
" 18th—Andrew Kelly, Can. Fish & Cold Storage Co.	93,000
" 21st—Zibassa, Do.	50,000
" 23rd—Borealis, Atlin Fisheries Ltd. shipped to Can. Fish Co., Ltd.	47,000
" 23rd—Chief Skugaid, Can. Fish & Cold Storage	80,000
" 25th—Zorra, Atlin Fisheries, Ltd., shipped to Can. Fish. Co., Ltd.	7,000
	1,312,000

Totals for month April 27th to May 25th.

Vancouver	1,136,000 lbs.
Prince Rupert	1,312,000 lbs.
Do. Independent's bought by Atlin Fisheries, Ltd. and shipped to Canadian Fish Co., Ltd., Approx.	200,000 lbs.
Total	2,648,000 lbs.

RECORD MACKEREL CATCHES.

London, May 8th.—Record catches of mackerel have been made off the Cornish coast during the past few days. The landings at Newlyn and St. Ives were computed at 1,750, or about four times as many as last year.

THE GREAT LAKES FISHING

By A. A. KIRBY

This looks like a good trout year. During the month of May there has been more than enough stock to meet all the demand and in addition provide a large quantity to be frozen for future use. All Lake points have produce more than the usual catch, and as a consequence every concern connected with the disposal of stock has had its hands full to sell the output. Of course, May and October are the months of heavy production for trout, and it is to be expected that the run is heavy, but freezing fish in May is uncommon. The stock has to be carried a long time before they can be sold in this condition and trout does not do its quality justice when carried over to the same extent as such sea fish as halibut and salmon. Moreover, the prices paid the fishermen are somewhat higher than in previous seasons and the natural outcome is that the fishermen is getting the advantage at the present time, as their total output is contracted for at a certain price in the great majority of cases, no matter what the quantity.

Whitefish are really ust commencing to come on as this is written, and so far the catch is good. It is a rare occurrence to have any Great Lakes whitefish frozen, and it is impossible to predict the outcome just now. The heavy run of whitefish comes on in the latter part of June and early in July.

Pike and Pickerel catches have been about the average. There is only a limited market for either class of stock, as these fish are consumed mainly by the foreign population, notably the Jews. As a consequence the consumption of these fish in any city or town is to a great extent governed by the number of their foreign population. The American cities as a rule are the outlet for fishermen who have pike and pickerel to offer. Canadian towns and cities will use only a small percentage except at a ruinously low price, which would not pay the fishermen to set their nets. Even in this case it is quite probable that a great deal of choice edible fish would be wasted, as very few people will deny the exquisite flavor of a fresh-caught yellow pickerel.

The past couple of weeks has been quiet on Lake Erie. Whitefish has dropped off and the herring run is small at the present time. The last couple of days in May there were some good catches made by some of the fishermen, but for the most part the nets are out of the water until the herrings show again.

Altogether the supply of lake fish is holding out well, but on the other hand the demand is not altogether encouraging. As intimated in these columns on previous occasions, there has been a wonderful increase in the consumption of sea-fish, particularly halibut and the salmons, and the prospect is that the lake fisherman producing trout will have to face a cut in his income some time in the near future. The sea-fish are practically all sold headless, but this has not yet been done to any extent with trout. The public are demanding more every day in food "ready to cook," and with the waste eliminated before it reaches them. If a change in the method must be made it is doubtful if the public will pay an additional price in the face of sea food competition and the fisherman will probably have to carry the difference.

The fish business in this country, compared with some of the older countries, is in its infancy. This refers particularly to the amount of fish consumed, and we are prone to blame the consumer for overlooking something to his advantage. This is true to a certain extent, but at the same time it is questionable if the dealers in fish are not somewhat behind the times in doing their part in educating the public. There seems to be a crying need for a national association to take up this work in a big, broad way, and in this they would undoubtedly have the aid and assistance of both Federal and Provincial Governments if we are to judge from the interest that Fisheries Departments have displayed in the last few years. Producer, dealer and consumer would gain much by such a work and it would prevent the waste of vast quantities of edible and nourishing food.

A curious fact is rought out in connection with the periods of heavy production on the lakes and in sea fishing. There are times in the year when certain varieties of lake and sea fish are being produced in such abundance that the price drops to a very low level, and it would be highly economical to the consumer to purchase, but it has been found that in certain parts of the country that sea fish are practically unsaleable and in other parts that lake fish are practically unsaleable. It is only fair to say that this occurs mainly where one of the kinds is unknown and where the other is produced in the near vicinity. However, the curious fact is that heavy production on lake and ocean do not always occur simultaneously and a lake fish town will not use sea fish even when the fish that is best known to them is not available. This probably occurs to the same extent when the situation is reversed. Education of the public to overcome this cannot be undertaken by any one man or concern, and seems the proper field for a national association.

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The Grand Trunk Pacific have under construction two hundred and fifty steel-tired refrigerator cars for operation out of Prince Rupert. These cars are designed for the shipment of fresh fish. They are built to run on fast express trains or to attach at head of passenger trains. The company expects to carry several carloads of the famous Pacific Coast fish each day out of Prince Rupert.

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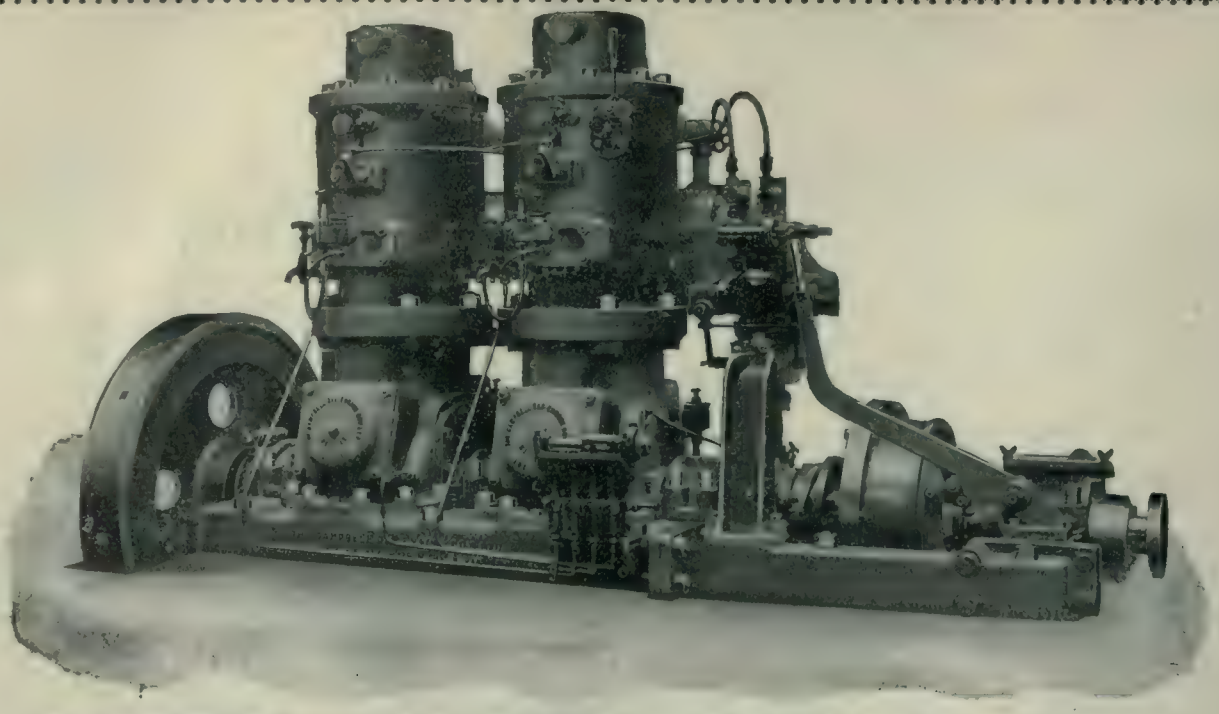

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Department of Marine and Fisheries

FISHERIES:

In addition to the full statistics of the Fisheries which are published yearly in the Annual Report, the Department issues monthly bulletins containing statistics of the sea fisheries and general information in regard thereto. Copies of these will be sent free to any applicant.

The value of the Fisheries of Canada is now about $34,000,000.00 annually.

The demand in the home markets for fresh and mildly cured fish, is expanding very rapidly. The Department pays one-third of the express charges on all shipments of such fish from the Atlantic Coast to points as far west as the eastern boundary of Manitoba, and from the Pacific Coast, as far east as this boundary. Over 1,000 tons more fish reached Montreal for use there and distribution to other points from the Atlantic Coast, under this arrangement last year than the year before. The growth has been equally satisfactory from the Pacific Coast to the Prairie Provinces.

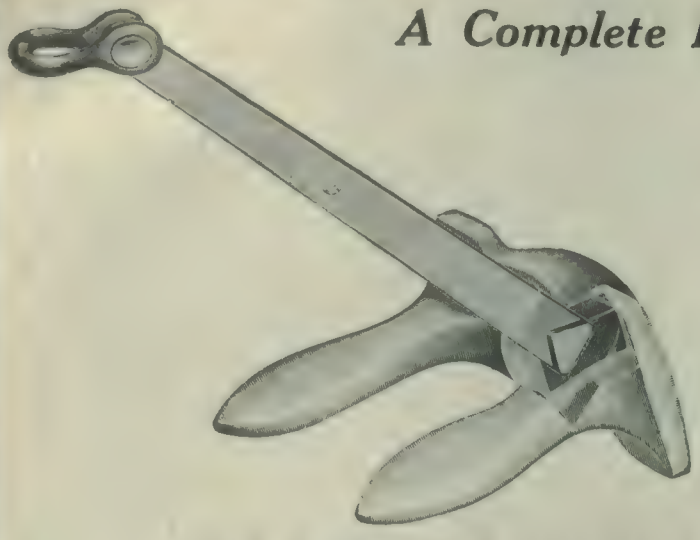
Close Seasons for Fish in Force on December 1st, 1913

Kind of Fish:	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.
Bass (Achigan)	.....	.....	.....	1 April to 15 June.
Maskinonge	.....	.....	.....	15 April to 15 June.
Ounaniche	.....	.....	.....	1 Oct. to 30 Nov.
Oysters	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.
Quahaugs	Oct. 1 to May 10 July 1 to Aug 31.	Oc.. 1 to May 10 and July 1 to Aug. 31.	Oct. 1 to May 10 and July 1 to Aug 31.	.....
Pickerel	.....	.....	.....	April 15 to May 15.
Salmon (netting)	Aug 15 to March 1.	Aug. 15 to March 1.	.....	Aug. 1 to April 30.
Salmon (angling)	eAug. 16 to Jan. 31.	Sept 16 to March 31.	.....	Sept. 16 to April 30.
Smelts	fApril 1 to July 1.	fMarch 1 to June 30.	fApril 1 to June 30.	.....
Sturgeon	.....	June 1 to July 1.	.....	June 1 to July 1.
Speckled Trout	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to April 30
Salmon Trout	.....	.....	.....	Oct. 15 to Dec. 1.
Whitefish	.....	.....	.....	.....

Kind of Fish:	Ontario.	Manitoba.	Saskatchewan.	Alberta & British Columbia.
Bass (Achigan)	a15 April to 15 June.	.....	.....	.....
Maskinonge	15 April to 15 June.	.....	.....	.....
Ounaniche	.....	.....	.....	.....
Oysters	.....	.....	.....	.....
Quahaugs	.....	.....	.....	.....
Pickerel	cApril 15 to May 15.	April 15 to June 20.	dApril 1 to May 15.	dApril 1 to May 15.
Salmon (netting)	.....	.....	.....	.....
Salmon (angling)	.....	.....	.....	.....
Smelts	.....	.....	.....	See regulations.
Sturgeon	.....	gMay 15 to June 15.	gMay 15 to June 15.	gMay 15 to June 15.
Speckled Trout	Sept. 15 to April 30.	.....	.....	.....
Salmon Trout	hNov. 1 to Nov. 30.	.....	.....	.....
Whitefish	hNov. 1 to Nov. 30.	Sept. 15 to Nov. 19.	iSept. 15 to Dec. 15.	iSept 15 to Dec. 15.

a—Except in Lake Erie west of Pt. Pelee and around Pelee Island, where close season is May 25 to July 15.
b—Except on leased areas, where close season is from 1 July to 31 Aug.
c—No close season in St. Clair River and off Lambton County.
d—Except in waters north of or intersected by 54th parallel north lat. between eastern boundary of Saskatchewan, and 109th meridian and in waters intersected by or north of 55th parallel n. lat. west of this meridian to western boundary of Alberta, where there is no close season.
e—Except in Cape Breton Island, where close season is from Sept. 27 to May 31.
f—Bag-net fishing season Dec. 1 to Feb. 15; gill-net fishing season Oct. 15 to Feb. 15. Licenses required for bag-nets or gill-nets.
g—Sturgeon fishing prohibited until Jan. 1, 1916.
h—No close season in Lake Erie.
i—Except in waters specified in (d) where close season is from 1 Oct. to Nov. 30.
For British Columbia See Regulations.

FISHERMEN'S SUPPLIES



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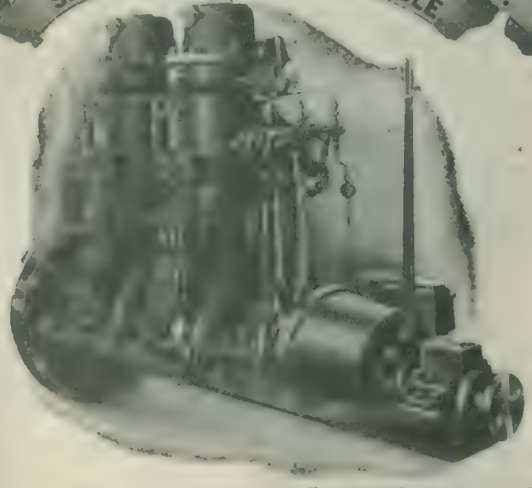

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CANADIAN FISHERMAN

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

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Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

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Vol. I. MONTREAL, JULY, 1914 No. 7

WHAT SHALL WE DO WITH DOGFISH?

When an Atlantic fisherman goes before the final Judgment Seat to answer for his sins in the line of bad language he can be reasonably sure of a pardon if he blames them on the dogfish. The dogfish has been the prime cause of more fishermen's profanity than any other thing afloat or ashore and it has been aptly named the pest of the Atlantic.

The offshore trawler baits and sets a mile of trawl and hauls it to find a dogfish wriggling on every hook, or if he is on fish, pulls up his gear with the heads and half devoured bodies of cod, hake, haddock, etc., dependant from the snoods. No other marketable fish will bite when the dogfish are on the grounds. In the first place, they seldom get a chance, for as soon as the fisherman has hove his trawls, the dogfish are on the hooks before the gear has reached the bottom. If, by any chance, market fish do get hooked, the voracious dogfish promptly devour them before the fishermen can haul them into the boat or dory.

The Editor has fished on grounds where ten dories setting four tubs of trawl apiece would get a dogfish on almost every hook, and during the trip the gang almost beat the dory gunnels off slatting dogfish. From ground to ground we shifted hoping to escape the pests, and after we fed most of our baiting to them, we got clear of these ocean marauders at last by hauling nearly fifty miles to the eastward. The offshore trawlers are not the only ones troubled by dogfish in the summer time. The shore fishermen get their share of them as well, and there is not a trawler or handliner on the Atlantic coast but would welcome any means of ridding themselves of the pest.

Our friends in the United States have been devoting a great deal of attention to the dogfish problem and it is suggested that a bounty be paid to aid the fishermen in exterminating the nuisance. A war of extermination, as far as the dogfish is concerned, is pretty much a hopeless task. They are too profilic to be exterminated easily, and the only thing that can be done is to utilize the dogfish for something and create a market for the product.

At the present time there is a small market for dogfish for use as oil and fertilizer and some little market in the Orient for salted fins and tails, but this market is not large enough to make it worth while for fishermen to bring in all the dogfish caught. In Canada, the Government have established three dogfish reduction plants to manufacture fertilizer and oil, but they are not of sufficiently large capacity to take all the dogfish that could be offered, and as before mentioned, the market is not large enough to take the product at a price which will pay the fishermen.

It has been proved, however, that the dogfish is good eating—just as good, and in some cases, better than many of the eatable fish on the market today. Canned dogfish has been submitted to epicures and they have pronounced it excellent in taste and quality. In one case it was eaten with great gusto by a well-known fishing skipper, but when he was told that he had made a meal off canned dogfish, he almost choked in his disgust. All of which goes to show that there is an unfounded prejudice against using dogfish for food, and if it were filleted, smoked or salted, no one would be any the wiser.

The problem is a grave one and worthy of a Govern-

ment Commission to handle. Everything has its uses and scientists have proved that the dogfish is capable of being utilized for many valuable purposes. Oil, fertilizer, tanning fluid, gelatin, and many other things can be manufactured out of it. As a fish food among the poorer classes in America, the West Indies, South America, Europe and the Orient, the dogfish, properly prepared could surely find a market without ousting the cod, haddock, hake, pollock, etc. Our Government has Trade Commissioners in various foreign countries who could be instructed to find a market for the fish if trial shipments were prepared and forwarded as samples. Governmental work of this nature would help the fishermen immensely and be the means of turning a present day pest into a marketable product.

TORONTO EXHIBITION FISHERIES EXHIBIT

Last summer an exhibition of Canada's fisheries was held at the Canadian National Exhibition, Toronto, under Government auspices. The display included specimens of sea and lake fish, fresh and frozen and the whole exhibit created a great deal of interest. The newspapers had articles upon some phase of the fishing industry almost every day and with the vast number of people who visited the show, the benefits to the fish trade and the fishing industry have been noticeable ever since.

The Department of Marine and Fisheries have recognised the value of such display and this year, space has been reserved for a larger and more extensive fisheries section at the Exhibition. The different exhibits will not only be more extensive than they were last year, but it is intended to instal a chilled show case in which to display the different kinds of sea and fresh water fishes in a fresh state, and also to operate a first class fisheries restaurant on the Exhibition grounds.

The show case will be about forty feet long and constructed so as to show specimens of fish from both sides. These specimens will be renewed daily by fresh supplies from sea and lake so that they will always be in an attractive condition.

Realizing that one of the most important reasons why so many people are not using more fish in their daily menus, is because they do not know how to cook it in a dainty and tasteful manner, the Government purpose to erect and equip an attractive restaurant where fish will be served. With skilled cooks in attendance the various kinds of fish food will be prepared in a thousand different ways and the public invited to sample the tasty results of expert cooking. To help this work, the Fisheries Department are having a handsome illustrated booklet giving cooking receipes and fisheries information prepared for free distribution.

The CANADIAN FISHERMAN is in hearty accord with the Government in publicity work of this nature, and we feel certain that the Fisheries Exhibit as planned for this year will benefit the fish trade and the fishermen immensely.

THE CANADIAN NAVAL VOLUNTEER RESERVE.

By a recent Order-in-Council an appropriation has been set aside for the upkeep and formation of a Volunteer Naval Reserve force. The proposal, as at present outlined, is to enroll twelve companies of one hundred men—these companies to be located at various central ports throughout Canada. Those who fostered the proposal had in mind the utilization of our coasting seamen and fishermen as probable naval volunteers—taking these men and giving them naval drill for three weeks each year. Being seamen already, it is not necessary to give them a training in seamanship—their daily vocations giving them more seamanship than they would ever get in a naval training ship.

Speaking for the fishermen of our waters—sea and lake—finer men for naval training could not be found anywhere in the world. They are hardy and strong, used to hardships and roughing it, and being highly intelligent, they would make ideal recruits—providing there is not too much rigid Navy discipline exercised over them. With likeable officers and diplomatic instructors they will learn readily and quickly, but the first attempt to break the inherent independent spirit natural to the fishermen by the stringent laws of the lower deck, will see a disruption in the ranks. Trained intelligently upon the moral persusion principle, we could turn out Naval Volunteers with the nerve and hardihood to go to sea and handle guns in anything and in any kind of weather. Men who can stand the racket of roughing it and who, as small boat sailors, are unequalled in the world.

As mentioned before, the Reserve idea was instituted primarily for training fishermen and coasting seamen—those who spend a great deal of their time at sea. However, the idea of Naval Volunteer service is having a very attractive aspect in the eyes of the yachtmen and landsmen with something of a seafaring spirit. At the present time with only 1,200 men to enrol, yachtmen and amateurs should not be encouraged. Enlist the fishermen and seamen first. Let them form the "stiffening" of the Service—the ground tier ballast, as it were—and enrol the amateur seafarers afterwards.

The latter admonition is a most important one. If the yachtsmen and motor-boatmen rush the recruiting offices, we are liable to have a Naval Reserve composed of "gentlemen rope haulers" "gasolene sailors" and men with greater idea of a uniform and its effects upon the ladies than anything else. If such a thing comes to pass we can look in vain for the real twine handler or marline-spike sailor in the ranks of the Canadian Naval Volunteer Reserve.

THE MOTOR ENGINE IN BANK FISHING VESSELS.

Bank fishing vessels in Canada have not adopted the use of motor engines in their craft as our neighbours across the line have. We are still building fishing craft without engines and their owners seem to think that sail alone is good enough for years to come. Salt fishermen do not require auxiliary power as much as do the fresh and market fishermen, but there is no doubt that the auxiliary is a great boon in all varieties of off-shore fishing. Newfoundland, whom we always regarded as being away behind in modern fishing methods, is beginning to realize that the auxiliary fishing vessel pays best in the long run and a recent report states that "Captain John Lewis, one of the most experienced and successful banking skippers of Newfoundland has satisfactorily demonstrated the value of the motor-propelled vessel for the bank fishery. At the beginning of the season he installed a motor in his vessel, the Metamora—an unnecessary luxury, so many of his friends thought. However, while most of the banking schooners are reporting doing nothing, Captain Lewis has got back to Harbor Breton from the Banks with eight hundred quintals of fish, and fully convinced that a motor banking schooner is to be the banking schooner in future.

Many vessel owners balk at the first cost of installing the engine, but they would do well to take into account the saving of time which it effects: the wider range of fishing operations it gives the vessel, and the shorter and more certain duration of the trips. Towage bills are done away with, and an engine is the best insuarnce for a vessel while working around the coast in bad weather. Much of the cost of an engine in a modern type of vessel would be saved in doing away with topmasts and light sails as well as a certain amount of ballast.

TECHNICAL EDUCATION FOR FISHERMEN.

The CANADIAN FISHERMAN is a strenuous advocate of a system of education for fishermen and we are always ready to publish suggestions along that line. In conjunction with our special writers and editorially our policy has been to do all we can to procure information of value to fishermen. But we cannot do it alone. To bring our great fisheries to a higherstandard and to develop them, we need a well planned system of fisheries education among our fishermen conducted by men who know what they are talking about.

Mr. Colin McKay a frequent contributor to this magazine and an able writer with a first hand knowledge of the Atlantic fisheries, has written several interesting and valuable articles upon the subject of technical education for fishermen. His work is bearing fruit and during the last session of the Nova Scotia Legislature, Mr. J. W. Margeson and Mr. Zwicker, members for Lunenburg, quoted one of his articles in a recent number of the CANADIAN FISHERMAN and strongly advocated the adoption of the policy outlined by him.

The Government maintains agricultural colleges and mining and forestry schools for the instruction and benefit of those engaged in these important industries, but the fisheries—a thirty-five million dollars a year industry—has nothing whereby fishermen can learn more about their business.

MODERN FISHERMEN.

In this issue we are publishing an article by Miss A. G. McGuire on Lunenburg and Its Fisheries. This article is undoubtedly interesting from the fact that it is written by a lady who has an intimate knowledge of the subject. We have read stories upon the fisheries and fishermen written by women who handle the subject as if fishermen were creatures little more than human and their stories when published in other magazines have the effect of making fishermen appear as people scarcely civilized. Miss McGuire has no such ideas and her story is particularly refreshing.

This peculiar notion has become so ingrained in the mind of the ordinary public that to present a true picture of the modern fisherman is to be disbelieved. A famous Boston actor recently took a trip to the Boston fish pier in order to study fishermen at close range for to get local color for a stage act. He was so astonished at the dress and manner of the fishermen he saw there that he said his audience would be disappointed if he appeared before them in the genteel dress of the present day trawler.

The fisherman may wear oil-clothes and red jacks in his business, but he does not wear an oil-coat as a smoking jacket in his parlor, nor does he stroll around town in his sea-boots. Anyone who has worn heavy fishing boots for any length of time at sea has no desire to keep them on any longer than is absolutely necessary. The mechanic does not wear his overalls as a sleeping suit, nor does the fisherman retire to bed with his oil pants as pyjamas. It is about time the public ideas regarding fishermen and their mode of living were dispelled.

BUSINESS OPPORTUNITIES IN CANADIAN FISH TRADE.

China.—Salted fish and codfish in small boxes. Trade Commissioner, Dr. J. W. Ross, Shanghai, China.

Great Britain.—There is an increasing demand for cod and whale oils in this district. Quotations from Canadian exporters will be placed before probable buyers. Imports on 1912 exceeded $6,000,000, to which Canada contributed $765,540. Trade Commissioner J. E. Ray, Birmingham, Eng.

Fish as Food

By Cecil Boyd.

Ever since its advent among Canadian periodicals, The CANADIAN FISHERMAN, alive to duty, has been actively advocating the increased consumption of fish, laying particular emphasis on the great value of sea-food as an important factor (yet only faintly appreciated) in reducing the present high cost of living. It is encouraging to note that this idea is being advanced in other quarters and by those whose opinions on the subject in hand should carry great weight. The press has just now been telling us how the commission appointed by the Dominion Government to search out the reasons and suggest remedies for the soaring prices of the necessaries of life has been struck by the possibilities of fish-eating as a cost-of-living reducer. In this connection, perhaps it would be interesting for Canadians to know that our neighbors across the border are receiving the same advice from their officials. "To reduce the cost of living, eat more salmon," is the wise counsel contained in a bulletin lately issued by the U. S. Bureau of Fisheries. It will thus be seen that the up-to-date experts of Uncle Sam's strenuous domain are at one with the CANADIAN FISHERMAN and Canadian High-Cost-of-Living Commission on this point.

The circular referred to, which deals only with salmon, goes on to give some rather interesting statistics as to its nourishing value. Twenty-five cents worth of canned salmon, according to this authority, contains as much nutriment as 72 cents' worth of eggs, 66 cents' work of steak, 64 cents' worth of mutton, 43 cents' worth of chicken, and 26½ cents' worth of ham. These estimates are all based on average American prices, which, I imagine, would not differ materially from those ruling in Canada. That matters but little, however, as the important point, clearly shown by the quoted figures, is the very high food-value of certain species of fish.

The document in question further says that the best grades of canned salmon are richer than meats in body-building materials and contain about the same amount of fats. The cheaper grade, known as pink salmon, is better than meats for the making of flesh and bone, but has less fat. Either kind is as digestible as the best sirloin steak, there is no waste, the only part you can't eat being the can. From a health and sanitary standpoint also salmon is declared to be more desirable than meats, because, while meats may be inspected, they are handled by many persons after inspection and are exposed in the market places. Canned salmon is sealed against contamination, and from the time that they enter the canneries fresh from the cold waters in which they are taken, are practically untouched by the hand of man.

Now, while the above statements have particular reference to the salmon, a great deal of what is there pointed out I believe to be equally true of the general run of our Canadian products of the sea and river. While the exact proportion of nourishing food-elements would no doubt vary somewhat in different kinds of fish, yet it would seem to be a fact that the actual worth of fish in general as food is greatly under-estimated by the general public. No less an authority than Sir James Crichton-Browne, the eminent English physician and scientist, has spoken strongly on this subject, recognizing it as a fact that calls loudly for correction for the benefit of all concerned, and directly or indirectly, it concerns all.

FISHERIES STATISTICS, MAY, 1914.

The total value of salt water fish in first hands, landed in Canada during the month of May, 1914, amounted to $1,791,259, which is 373,956 less than the total for May last year. The falling off is due largely to the fact that the Lunenburg Banking Fleet was prevented from getting to the Magdalen Islands for bait till much later than usual, and did not land any fish during May this year.

Spring herring was as abundant as ever, but as ice remained late on the coast and retarded fishing operations, the catch was considerably below that for May last year.

The total pack of canned lobsters on the Atlantic coast from the 15th of November to the end of May was 81,702 cases, while the total shipment in shell was, 68,552 cwts. During the corresponding period in the preceding year the pack was, 97,039 cases, and the shipment in shell, 78,813 cwts.

SOME HIGH LINE STOCKS OF AMERICAN VESSELS.

The Gloucester Times compiled the following record stocks of American salt fishermen and halibuters. Many of the skippers are Canadians and the stocks are therefore of interest to the home fishermen.

Schr. Yakima, Capt. Robert Wharton, of the John Chisholm fleet, stocked $4,595 and the crew shared $104.80 clear, as a result of her recent halibuting trip.

Schr. Avalon, of the William H. Jordan and Company fleet of haliuters, stocked $3,060 and the crew shared $79.34 clear as a result of her recent trip. The Avalon was commanded by Capt. James McLennon, who died of blood poisoning at Shelburne, N. S., while bound home from the banks.

Schr. A. Platt Andrew, Capt. Wallace Bruce, another of the John Chisholm fleet, stocked $5,900 and the crew shared $127 clear from the recent Cape North salt shacking trip.

Schr. Marsala, Capt. Owen Whitten, Georges handlining; stock, $1,117.33, high line share, $71.12; cook's share, $88.39.

Schr. Jubilee, Capt. Adolphe Amero, salt drifting; stock, $1,875.44; high line share, $69.36; cook's share, $101.72.

Schr. Teazer, Capt. Peter Dunsky, halibuting; stock, $3,293.36; share, $68.22. The Teazer is fitted with auxiliary power.

Schr. Mystery, Capt. James Mason, halibuting; stock, $2,756.33; share, $61.

Schr. Pauline, Capt. Neis Larsen, Georges halibuting; stock $2,146.13; high line share, $87.49; cook's share, $116.73.

Schr. Patriot, Capt. Al. Dolman, salt drifting; stock, $1,748.16; high line share, $77.54; cook's share, $97.67.

Schr. Benjamin A. Smith, Capt. Martin L. Welch, seining; stock, $3,597.42; share, $56.20.

Schr. Ralph Russell, Capt. Leander Phalen, salt drifting; stock, $2,073.24; high line share, $91.63; cook's share, $122.12.

Schr. Lucinda I. Lowell, Capt. Oscar Lyons, fresh drifting; stock, $1,403.09. The craft was out but one week.

Schr. Thalia, Capt. Percy Firth, fresh drifting; stock, $836.20. The craft was also out but a week.

Who's Who in the Fishing World

Many men are more or less distinguished by some outstanding feature of their mental or physical make-up, which seems to occur to all acquaintances alike when the name comes up in conversation. It may be some habit, good, bad, or indifferent, or some pose or noticeable feature—witness the cartoons of our prominent Canadians, particularly when shown in an organ of the opposing political party.

For a man to be known for his pleasing personality, above all other excellent qualities, is not common. His ability is shown by remarkable results in his business, but his friends and acquaintances throughout Canada know him better by the fact that he is not supposed to have an enemy in the world.

Mr. Frederick Thomas James, President of the F. T. James Co., Toronto, is 45 years old and was born in Birmingham, England. As a boy he spent some time at sea, sailing before the mast. His career as a sailor ended abruptly when his schooner was shipwrecked

by an iceberg in the North Atlantic. The crew took to the boats, and after a week spent without food and with very little water, were rescued by a passing steamer. Only eight of the original fifteen survived, and all were badly frost-bitten, two of these having their feet amputated later. Mr. James was the youngest of the crew, merely a boy, and it spoke well of his physical powers that he ever managed to live through this harrowing experience.

With no more ideas of a life on the ocean wave, he came to Canada, and after a series of varied undertakings, he took a position in a minor capacity with a Toronto firm of fish dealers. His schooling lasted a a number of years, and the mistakes of his employers both in their ideas of handling fish and in their attitude toward the public, laid the foundation of the present busines of the F. T. James Co., Limited.

The beginning of the new firm under Mr. James was as small as any biographer could wish. A space about 100 square feet, rented by the month, was sufficiently large. But the policy of the new firm was a revelation and the business has not ceased to expand in the ensuing sixteen years. Under Mr. James' able management and aided to a large extent by his genial personality, the F. T. James Company, Limited, now ranks as one of the largest fishing and fish distributing firms in Canada, while the Company's trade mark—Beacon Brand—is like the President, one of the "shining lights" of the fish business in this country.

Much of his spare time is spent with his family, and they accompany him on his trips wherever possible. His pet hobbies are flowers, dogs, and canaries. Those who have been entertained at his summer home at Lambton will remember the remarkable display of flowers and plants, and the genuine hospitality of this home.

Success has not spoiled his wonderfully likeable disposition and it smoothes the thorny path of business to meet such men, with all the keen rivalry of business, are still intensely human. The CANADIAN FISHERMAN takes great pleasure in adding Mr. James to its prominent personalities in the Fishing Industry.

47,500 FISHERMEN IN OUR WATERS.

According to statistics gathered by the Fisheries Department, the number of fishermen engaged on the Atlantic Coast is approximately 47,500, as compared with 8,700 on the Pacific Coast, 3,600 on the Great Lakes, and 5,500 in other inland lakes and rivers. The average yearly yield per man on the Atlantic Coast is $297; on the Pacific Coast $1,664; on the Great Lakes, $788, and on the inland lakes and rivers, $237. The comparatively low average per man on the Atlantic Coast is due to the fact that many farmers who engage in occasional fishing are counted as fishermen.

NEW VESSELS.

The third new vessel to be completed this season at the Joseph McGill shipyards, Shelburne, was successfully launched Saturday morning. She was named Wilfred Marcus, and is 110 feet over all; 25 ft. 6 ins. beam; 10 ft. hold, and registers 153 tons. She was built for George A. Buffett and others, of Grank Bank, Nfld., and was designed for the fish carrying trade between Newfoundland and Mediterranean ports. This business requires a style of craft both speedy and able, and a good carrier, and the Wilfred Marcus promises to combine all these good qualities. She will be rigged as a tern schooner, and in material, workmanship and outfit is thoroughly first-class. She will sail in a few days for her home port, under command of Capt. Grandy, who is also part owner

The building blocks just vacated by the Wilfred Marcus will be at once occupied by a 90-ton schooner, for parties in Burin, Nfld.

LUNENBURG AND ITS FISHERIES

A Brief Story of the Gloucester of Canada and Some of the Pioneers of the Salt Fishery.

By AGNES G. McGUIRE.

That "Great oaks from little acorns grow," has perhaps never been more fully exemplified, than in the history of the Lunenburg dry fish business, more particularly that of the bank or trawl fishing.

In the old days, that is, nearly sixty years ago, Lunenburg fishermen were engaged in hand-lining or Labrador fishing. Trawl fishing was an unknown factor, until a captain from the Island of Jersey came here with great stories of how this business was prosecuted in France and on the south coast of England. This man's name was La Shell and he understood the question so well and put up his arguments so forcefully, that he persuaded the late W. N. Zwicker, to equip a schooner for this method of fishing.

mode of fishing, and to his experimenting and perfecting of methods, is largely due the adoption of bank fishing as an industry for Lunenburg to the practical exclusion of all others. About the year 1873 Captain Anderson started with the schooner "Dietytris." At this period the trawls were of hemp and cotton barked twine. His trip being very successful, the next year others followed, among them being Capt. John Hebb, who sailed the "Stella," Captain Edward Hirtle in the "Florestra," and Captain Charles Smith who made the first trip to the Grand Bank, which at that time was considered quite a venture. Imported hooks were now used, the Buchanan being the first purchased.

As the years passed, one and another of the enter-

LUNENBERG WHARVES.

The materials at hand must necessarily have been of the crudest, but the intrepid La Shell little cared, as long as he could get a start made, and was as proud of his schooner, the "Union," as if she were one of the prize bankers of to-day's fleet. To these well outfitted modern fishermen their gear would seem well nigh impossible, as the hooks were hand-made, and the boats used were whalers, instead of dories. The trawls were made of hemp of English manufacture. La Shell's trip was so successful that the returns from the spring trip on the western banks were 600 quintals of large cod.

This naturally fired the ambition of the young skippers of that day, and among them Captain Benjamin Anderson, who is regarded as Lunenburg's pioneer of the bank fishing business as far as her native sons are concerned, determined that he also would adopt this

prising skippers had their vessels equipped for banking, borrowing ideas from the American fishermen, who were then using various sizes of steam-tarred cotton twine and Milward's hooks. Since then there have been many improvements in different makes of hooks, nearly all of which have been used in the Lunenburg fleet.

The first bait that was used were Alewives from St. John and Digby, afterwards herring, then caplin caught on the Newfoundland coast, and still later squid, jigged on the Banks or seined in Newfoundland harbors.

The outfitting from a culinary point of view at that time forms a very sharp contrast to the outfitting of the present day, as a little sketch of both will conclusively prove.

In the old days a vessel was considered well stocked

which carried two barrels of wheat flour, one barrel each of beef and pork, home cured at that, eight or ten barrels of hard tack, a small amount of tea and coffee, the latter of a most inferior grade, a puncheon of molasses, and a large quantity of Jamaica rum, it being customary at that time to serve grog to the men on their return from attending trawls. Under the head of luxuries were "apple schnitts" for pies, rice, round peas and potatoes.

To-day the bills of the outfitters read like orders for an up-to-date cafe. Hams, cases of eggs, canned goods of every description, including, pineapples, peaches, strawberries, pumpkins, tomatoes, etc., buckets of jam, dried fruits, evaporated fruits, jellies, quantities of the very best flour, prime plate beef, and extra mess pork; vegetables of all descriptions, sauerkraut, pickled beans, and dried beans for baking; creamery butter, condensed milk, evaporated cream, huge bottles of flavoring, with an almost incredibly large amount of sugar in every form. Cases and cases of icing sugar, dessicated cocoanut and colored sugars for decorating the cakes and pies which are on the daily menu of every banker. The Lunenburg fisherman has a very sweet tooth, and possibly unconsciously recognizes the fact that sugar is the greatest energy producer known to science, being as a stimulant far ahead of the old-time grog, with none of its evil effects. The cook of one of these bankers has no cinch; he is at it early and late, taxing his ingenuity to provide tasty sweets and attractive dishes for his men, and serving four meals a day. But it must be easier to cater to their wants with vessels supplied like these, than in the more poorly-equipped ones. As it is generally admitted that the Lunenburg owners outfit more lavishly than any other. In fact, the American owners only supply staples, the crews having to pay for luxuries and doubtless one of the latter owners would stare, to say nothing of swear, if ice cream freezers were demanded by his cooks, as they have been on several, though not all, of the Lunenburg fleet.

It is a fact also, that several of the cooks with extremely swell notions, carry a china tea service to serve five o'clock tea on Sunday afternoons, at which the very best cakes they are capable of putting up, with hot biscuits, etc., are set forth in tempting array.

The skippers of the old days think this sort of thing spoils the men, but there are few lives harder than that of the bank fishermen, and if the perils they face almost daily can be offset by catering to the inner man, no one should criticize the methods.

WHARF PROPERTY, ZWICKER & CO., LTD.

About the time that the first trawlers were going forth, prices were equally startling as contrasted with those of the present day. A. R. Morash, formerly with the firm of J. D. Eisenhauer and Co., has bills which show that flour was quoted at $14.50 per bbl.; salt $1.50 per hogshead, herring $2.40 per bbl., with everything else in proportion.

During these years, there have been many changes along the waterfront in the fish handling firms, but the old, old firm of Zwicker and Co., which had its inception in 1789, makes only one change, and that is for progression. This firm, founded by John Zwicker in 1789, has been a business which has and still continues to trade with the ends of the earth. Prior to

1789 John Zwicker was a partner in the firm of Wm. and M. Rudolf, which closed its doors in 1788. He began business as a general and West Indian merchant, shipping fish, lumber, staves, etc., to windward islands and importing sugar, molasses, rum, coffee and tobacco. His venture apparently thrived, as old ledgers show that he owned twelve full-rigged brigs, two ships and several schooners. At his death in 1841 his sons, Edmund and Nicholas, assumed control of affairs, and the firm was known as E. and M. Zwicker. These men died comparatively young, and a younger brother, W. N. Zwicker, took charge, having in partnership with him John M. Watson, who later moved to Halifax, when Mr. Zwicker carried on the management of the

JOHN ZWICKER,
Founder of Firm of Zwicker & Co.

firm on his own account. In 1881 Arthur H. Zwicker, the eldest son was admitted as a partner and the firm name was changed to Zwicker and Company. In 1904, W. Norman and E. Fenwick, younger sons, were also admitted and the firm became a limited stock company. To-day this firm owns and outfits 35 large schooners employed in freighting and fishing, doing an export trade with Porto Rico and Trinidad. They are well equipped to handle bank fish, as they have installed in one of their stores the largest patent fish dryer in Canada, capable of drying 500 quintals per day. This was put in in the year 1905 and there is no worry about weather for curing, and the work goes along with clock-like precision and regularity and that it is done quickly, may be judged from the fact that from the time of its installation in the fall of 1905 to April 1906, 17,000 quintals were made ready for the market. There are 572 flakes, each 100 ft. long, and as it would be possible to burn a cargo of fish in the dryer as out in the hot sun, with care, the cured product is turned out to the utmost satisfaction.

Another of the pioneer firms to which a word must be given, although it has passed out of existence, is that of J. D. Eisenhauer and Company, which in its prime was a name to conjure with. It began its operations in 1856. At time Louis Anderson was interested in the business, from which he separated, later founding the firm of Louis Anderson and Company. Charles S. Morash was a partner in the Eisenhauer firm and the business handled by them was considered immense. Their chief export was fish, and they shipped from 16,000 to 20,000 barrels of herring and from 100.00 to 112.00 quintals of cod in a year to West Indian and other ports. They outfitted 47 vessels beside handling 55 shipments yearly to the West Indies.

The firm of Louis Anderson and Company, already mentioned, was also successful for a number of years. After the death of Mr. Anderson, the business was carried on by James Rudolf and eventually merged into the Atlantic Fish Companies.

The newer firms are those of Adams & Knickle, W. C. Smith & Company, the La Have Outfitting Company, Robin, Jones and Whitman and John B. Young. The outfitting of the fleet is divided among these firms as follows: Zwicker & Co., 35; W. C. Smith & Co., 26; Adams and Knickle, 16; La Have Outfitting Company, 16; Robin, Jones & Whitman, 7; John B. Young, 3. The returns in cash from these vessels' catches equal nearly two million dollars, of which 1,750,000 quintals are dry cod, the rest being pickled fish.

The passing of the brigantine, at one time the universal fish carrier, must be noted. In bygone days in the employ of Zwicker & Co., Eisenhauer & Co. and Anderson & Co., there were upwards of twenty-five brigs engaged in carrying fish to the West Indies. Of these there is a sole survivor, in fact the only specimen of her type in Canada, possibly the only one in existence, the "Maggie Belle," owned by Jacob Ernst & Sons of Mahone Bay.

The method of trawling as pursued by a Lunenburg banker to-day is practically as follows:

The fleet leaves port for the Magdalen Islands for

THE LATE W. N. ZWICKER.

bait or proceeds to Newfoundland for caplin, after procuring which they sail according to the skippers' judgment to the best fishing ground. The first step is to sound with a deep sea lead with a priming to pick up parts of the bottom to see if it is "hard" or "soft." Gravelly deposit brought up means "hard," in which case the anchor is cast. The vessels carry from five to seven dories. The captain makes seven tickets, and

on each ticket will be the "set" that each man will take, i.e., "starboard bow," or "port bow," "starboard beam," or "port beam," starboard quarter" or "port quarter," the seventh man going ahead or astern.

The men then proced to bait their trawls, and go out to set them, each man in the "set," for which he drew his ticket. The trawl is one and a quarter miles long. On the inner end is cast an anchor, twenty-one pounds in weight attached to a fifteen thread rope, which is run out, say seventy fathoms. A buoy is tied on, and the trawl line with hooks attached three feet apart is made fast and set line for line until the whole trawl is out, repeating the method for the outer end. The trawl is now what is called "set." The men return to their vessels for two hours and in the meantime "hug up." They then get up another supply of bait from the hold, and go to their trawls with the expectation of finding a lot of fish. Needless to remark their expectations are not always realized, but as the story is of a successful year, they will be represented as finding them. They haul the inner buoy first and get that

ARTHUR H. ZWICKER,
President and Managing Director of Zwicker & Co., Limited.

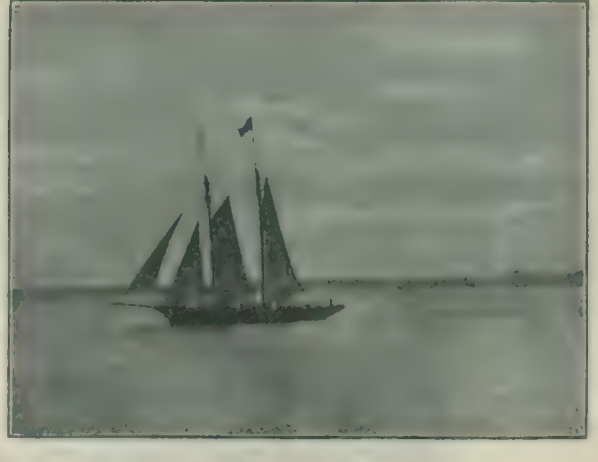
trawl across the boat, one man hauls the trawl, the other removes the fish and re-baits the hooks, the trawl running in on one side of the boat and out on the other. Sometimes when the fish are plentiful, four lines are all that are required to load the dory. Again, if luck is against them the whole twenty-four lines are called into requisition, and perhaps even those do not make a load. And, oh, doesn't the average fisherman believe in the "God of Luckiness"; with him it is all "luck." Now, if the little god smiles and continues to smile, eight days will fish out that baiting and they will return to land for more bait.

The spring trip usually extends from March to the first of June and an average good catch for this trip would be 1000 qtls., the summer trip is of course a different matter there being practically no limit to that, it varying from the first of August to the last of September, the catch ranging from 1200 to 2100 qtls.

When the fish are taken from the trawl all speed is made back to the vessel, and the fish are put in the hands of a dressing crew, whose duty it is to split, wash, throw in the hold and salt the day's catch in kenches, each day's catch being dressed as it comes in. The captains usually split the fish, which is an art in itself, being one of the most tiresome of all the ar-

CAPT. BENJAMIN SMITH,
High Liner for Nova Scotia, 1913—
Stocked Over $9,000.00.

duous duties involved in this business, requiring a wrist of steel and a precision of stroke which would do credit to a surgeon. The "headers" for their work receive from $30.00 to $40 per month and "throaters" from $18 to $25.



Schooner "Gladys B. Smith"—Always a lucky one.

In salting the fish the proportion used is generally 15 hogsheads of salt to 100 qtls. The settlements of the trips are divided after this fashion: the captains get 2½ per cent. of the trip, of which the owners pay half and the crew half; they also receive a commission

of 1½ per cent. of half the total stock, which is paid by the owners. The vessels are divided into 64 shares, of which the captain owns from 1-16 up, the rest being divided among merchants, other fishermen, cooks, etc. The first credit in settling is fish oil and halibut, the first charge bait, then masters' Commissions, headers and throaters wages, oil barrels, if in Newfoundland, water dues, with charges going in for bait, this is deducted from gross receipts of trip. After this deduction one half of the net proceeds goes to the vessel, the other half to crew who pay cook's wages and medicine.

The handliners who come principally from LaHave, fish in single dories, one third smaller than trawl dories. They share according to count. As a rule they use salt clam bait allowing 70 barrels to a vessel, They also provide themselves with nets for fresh bait. They usually fish at North Bay and Quero Bank.

Lunenburg and vicinity sends a fleet of 125 vessels to the Banks every year, and without exception all are engaged in salt fishing. The fresh fishing shacking, halibuting and mackerel seining play but little part in Lunenburg's fishery. With a strange conservation, the Lunenburgers refuse to depart from the business they established over a century ago, but their conservatism has been one of progress in their particular industry and today the town with its splendid fleet of up-to-date, able schooners, its progressive business firms, and solid, substantial prosperity, can proudly claim the title of the "Gloucester of Canada."

THE SELLING END OF THE FISH GAME

By A. E. Howard.

Fish, in common with a majority of food products, is in its natural condition a highly perishable commodity. It can be preserved by refrigeration for an extended period or it can be processed in a variety of ways to last indefinitely. During the course of Pure Food investigation in the States, with which the writer was directly concerned, it was laid down that the only natural preservatives for food products are air, water, heat, cold, salt, sugar, vinegar, hermetic sealing, possibly saltpetre, but expressly excluding borax and boracic acid. Of these, it was shown that refrigeration, cold chill, sharp freezing, par freezing, or even plain icing could only be recommended where continuity of process was unbroken as between producer and consumer. Now there can be no question that the trade in salt fish, or rather, brine pickled fish, as distinguished from both mild cure for subsequent smoking and air-dried or dry salted fish, has so far as this Continent is concerned, passed its zenith. Possibly the sole exception to this statement is the Hebrew trade, and to some extent the German trade, in brine-pickled herrings. And this trade is in a most flourishing condition. It is extraordinary to observe the sharp differentation of grades maintained by Yiddish consumption regarding the cheaper species. Iceland, Norway, Scotland (East and West Coasts), England, Germany, United States, Canada, all these countries contribute to the demand. Any Hebrew buyer will tell you instanter by merely tasting the pickled fish where the same originated. But apart from this trade all other packs of brine-cured fish are no longer to be found as a main staple of grocery stores throughout this Continent. Norway and Irish mackerel (formerly relished by thousands as a breakfast delicacy) are in serious decline. So too, brine-pickled salmon. The reason is not far to seek. Salt junk, so-called, no longer appeals to the palate of the general public. Canning and processing has made such enormous strides that it is impossible to market brine-pickled fish. Moreover, the grocer discourages the proposition. Package goods are cleanlier for mahogany finishings and, unless kept under glass, salt fish tend to an appearance which is out of keeping with modern retailing. Not that I would defend our "finicky" methods of buying groceries. Far from it. The high cost of living is directly attributable to insistance on buying food in a high state of manufacture. We pay more and really get far less. However, one must take conditions as one finds them.

There are, of course, many other methods of processing fish stuffs which now appeal to popular fancy. Canning is of two kinds. Sterilization and cold water process. The former field, we may disregard. It is a natinoal one and the markets are world-wide. A good deal might be done, and has been done, as at the Seattle Exposition in 1909, in encouraging consumption of the cheaper grades of Pacific Coast salmon, but after all, that is a line no single firm can hope to influence particularly. In nearly all canned fish packs as lobsters, cove oysters, shrimp, sardine-herring, mackerel, cod, etc., demand is well sustained for all available supplies. Cold water canning is prosecuted as yet only in the shucked oyster industry, although in the States Bismarck Heringe are prepared with vinegar in this manner. Smoked and flaked fish, air-dried or smoked whole cod, halibut or salmon, bricks and fillets of same are readily taken by the grocery trade at retail, as are dried and smoked herring and haddock. But here we begin to get in touch with the difficulty of distribution, which does not arise in warehoused sales of canned fish to wholesale grocery interests. It is all very well to talk of jobbers in fish. The jobber cannot get a better line on retail distribution than the producer. In fact, the more hands the more danger of deterioration. There is no way that I know of to overcome this difficulty but by direct sales, and such sales are best made by organization of producers in the various lines spoken of. Free fish means an enormous extension of market for Canadian producers all through the U. S. A.

Now we turn to the real crux of the whole propsition —the marketing of salt water and possibly fresh water fish in a natural condition. I speak of the latter because in the larger American cities there is a distinct Jewish market for fresh water fish of all kinds. I have written at considerable length on this subject elsewhere, but the main problem of the case remains unsolved. Fish markets at retail both in Canada and the States do not seem able to become self-supporting. It is otherwise in England, where the fish-monger handles poultry, and also cut flowers. His shop or store is easily the most hygienic and best patronized in any community. Over there people eat fish on a regular diet. It is not so here. A Community Fish Market is all right so far as it goes, but it is extremely difficult to see how out of town individuals are to avail themselves of it. There must be some receiver in the small towns of the interior to attend on necessary

icing and distribution. Heretofore, in Western Canada this trade has received the spasmodic attention of the local butcher, which simply means that the larger abattoirs have gone into the fish business, and this is very far from desirable for the general welfare of the industry. A fish concern in Puget Sound some years ago began shipping small consignments of fresh fish to express agents along the line of a transcontinental railroad. They have to-day a vast clientele along that line of rail and a well defined plan of operations. I have seen a consignment of frozen salmon sent out from Calgary to the farming districts and peddled from regular Bain wagons. Three such wagon loads were sold in less than three days. There is no question at all as to the demand for fresh fish in the interior of Western Canada. It is absurd to say that trainloads of our halibut on the Pacific must be hauled to Boston for market. It is quite certain that many cars are reconsigned back half the distance hauled. I have personally received letters from numerous American producers of both fresh and processed fish on Puget Sound speaking of the opportunities offering for sale over the territory opened up by three transcontinental railroads in the Canadian West. Moreover, I happen to know that it has been found necessary to keep the names of consignees of shipments made to Canadian points while in Vancouver because of the desire of American producers to obtain shipping information of this character. The problem is not that of selling the hotel and restaurant trade. It is that of selling the homes. Take the shucked oyster trade, which has a nation-wide circulation in the U. S. A. Canada is now producing oysters on both coasts and yet a smart Connecticut Yank evolved a shipping system for oyster retailing which is to-day found in half the grocery stores throughout the Dominion. It is, of course, needless to emphasize that fresh fish, whether iced or out of cold store, competes directly with the butchering trade, whereas processed and canned stock will always remain grocery staples. The propsition of placing fresh fish by direct sale as outlined, where necessitated by circumstances, results in the elimination of middlemen and resultant profit to offset additional shipping charges, which should be included in delivered prices. Basket shipments of fresh fish could either be made through the medium of the new Parcel Post or where no icing is necessitated through railway express service. For distant points or rural delivery segregation of individual orders could be undoubtedly arranged at defined terminals. I see no reason why such a proposition, which has proven feasible on the Atlantic, should not be availed of on the Pacific seaboard.

SCOTTISH FISHERIES.

A successful year in the fishing industry of Scotland is remarked upon in the thirty-second annual report of the Fishery Board for Scotland for 1913.

The fish caught proved more valuable than that of the preceding year, and while the previous year's catch was greater in quantity, 1913 marked the highest point in value yet reached in the fisheries of Scotland. This result was obtained by 8,991 vessels manned by crews numbering 38,262, the sea fish landed by them amounting to 7,828,350 cwts., valued at £3,997,717, an increase in value of £341,539, but a decrease in quantity of 758,756 cwts .

The high-water mark of the herring fishery of Scotland was reached, the catch amounting to 4,449,323 cwts., valued at £2,087,754, as compared with 5,201,300 cwts. of the value of £1,910,537 in 1912.

The report states that the number of persons employed in the fisheries and the various subsidiary industries in the year 1913 was 90,710. Of these, 38,262 manned the fishing fleet, 16,269 were gutters and packers of herrings, 14,560 were engaged in the carrying trade, and the remainder in other operations connected with the industry.

The advent of motor power is being felt, and the sailing boats being rapidly superseded. During 1913, 109 steam and 167 motor boats were added to the fleet, and since the close of the year a further considerable addition has been made.

It is stated with regard to motor power, however, that not much progress is being made with its introduction as an auxiliary motive power, as no satisfactory application of the propulsive motor power of the vessel to the hauling of the herring nets has yet been devised.

The principal factor as to propulsion is the financial one, and unless the adoption of motor power is followed by an increase in earning power commensurate with the capital expenditure and the necessary outlay for working and allowance for depreciation, the expenditure would not in general be justified, but apparently such increased earning power does follow.

One of the most pressing problems of the herring fishing industry, it is remarked, is the question of the growing need of increased harbour accommodation, both in docking space and depth of water. Fishermen are forced to lay up their fishing boats sometimes at considerable distances from their homes during the winter months. The necessary attention and repairs required can only be carried out at great expense in travelling and otherwise, to say nothing of enhanced dock charges

No review of the year's herring fishing would be complete, it is remarked, which left out of account the operations of Scottish fishermen at the English autumn fishing, and there, with a catch which was the greatest on record, the season was an unqualified success for all concerned. Curers amply retrieved any losses incurred during the Scotiish fishing; shore workers had almost more work than they could overtake; while fishermen, with their good earnings there, added to "record" earnings in Scotland, could at the close of season look back upon the most lucrative year in their experience In the Helmsdale district the women workers had the unique experience of bringing more money home than the value of the fish landed in the district during the whole year.

In the casualty list it is reported that thirty fatal accidents occurred, being one fewer than in the previous year. Twelve persons met their deaths through the foundering of their boats, eight fell overboard, six were washed overboard, and four were knocked overboard or killed by sails.

ORIGIN OF THE SHAD.

In the woods of Keewadin, it is said, there once roamed a very discontented porcupine. He was forever fretting. He complained that everything was going wrong, until he got to be such a great nuisance that the Great Spirit, getting tired of his grumbling, said to him: "You and the world I have made don't seem to fit. One or the other must be wrong. It is much easier to change you. You don't like the trees, you are unhappy on the ground and think everything is upside down, so I'll turn you inside out and put you in the water." And this was the origin of the shad.—Nautical Gazette.

THE HARVEST OF THE SEA

By Ernest McGaffey

(Secretary Bureau of Provincial Information, British Columbia.)

"Wha'll buy my caller herrin'?
They're bonny fish an' halesome farin',
Wives an' Mithers, maist despairin'
Ca' them lives o' men."

Few, even of the dwellers on the Western Coasts, have comprehended the infinite mystery and picturesqueness of the salmon fisheries of British Columbia. This great silvery denizen of the deep, prone on a butcher's block, suggestive of old-country streams and the double-handed salmon rod, where did he come from? From what tortuous maze of ocean channels, and from what far northern sea-fastness has he swam, until the meshes of the seine closed around him, or the "brailer" lifted him from the fish-trap to the scow, his journey ended.

This harvest of the seas, reaped from plains of the under-deep, holds an infinite number of fascinating pictures in its unfolding. Its very brevity accentuates the vividness of the scenes, the fishing being practically over in a few weeks. The beginning of one month may see sails and boats and a myriad-hued panorama of activity; the close of the succeeding month may witness the departure of all this, and comparative silence.

It is a drama of distinctiveness, played on a stage domed over by changing skies, with many actors in the different parts, with choruses of encouraging shouts, with music of gathering winds, and with comedy and tragedy fast following on one another's heels in the convolutions of the play.

Romance strikes palms with reality, for the spreading of nets and the flash of the tumbling fish is fresh

Photo, Broadbridge) LOADING A STEAMER AT THE RIVER MOUTH.

How he leaped, struggled and dove among the shining masses of his captured comrades ere the vital force was spent and he lay with color fading, a unit in the sum of commercial upbuilding.

The unravelled history of his tribe has still evaded scientist and scholar, for his pilgrimages to the coasts and rivers with their beginnings and endings have not yet been tabulated, classified, and thoroughly understood. The "big" years, or regular four year "runs" are events which nature still shrouds in conjecture, and his food, habits, and other peculiarities are as yet matters of unsettled supposition compared to the knowledge which has been gleaned of many other of piscatorial families.

with the picturesque, while the rows of serried cans in the canneries is the prosaic sign of the "finished article." The motley garb of the crews, the stalwart forms of the men at the "brailers," the flitting about of the fisher-boats, the glint of gulls wings, the heave of the waters, the salt-sweet smell of the lazy tides,—all combine to lend an unique and unforgettable fascination to the eye.

There is the keen zest of uncertainty to be reckoned with, too. Days of poor "runs," weeks of waiting for delayed convoys of the fish, the fight with a sea-lion or hair-seal in trap or net, the fall overboard of some luckless handler of net or oar. Every moment of the work during a big "run" is fraught with

excitement, and the filling of a salmon-trap with an unusually large rush of big salmon is a watery windfall that keys interest up to concert pitch.

Rarely there may be a night-raid by daring thieves, intent on robbing the traps. Flashes of fire in the darkness, shouts, oaths, and counter-firing. For a spice of the lawless crops out sometimes about the salmon fisheries, and the element of danger is not wholly despised by some of these prowling free-booters. If the scenes outside are so redolent of irregular movement and charm, the work at the canneries proceeds like clock-work, borne on mainly by machinery, and guided by steam or electricity. Here the fish are hustled about, so many items in a thriving business, so many figures in a sum total. Steel blades rise and fall, machines whirl and close, open and drop, and a relentless accuracy and dispatch characterizes the disposal of the finny grist. From catching to canning the luckless salmon is gravitated to a swift and sudden fate, and when the label is finally attached, and his commercial status irrevocably fixed, you catch the contrast afforded by the sails and the nets, the boat-men and the sea-birds, sea, sky and the lure of the open.

Photo, Broadbridge) A PILE OF 40,000 FISH AT SCOTTISH CANADIAN CANNERY.

Salmon-fishing is so well-established and definite a part of British Columbian commerce that it has been systematized by modernly-equipped plants, marvelously constructed machinery, and perhaps one of the most rigidly supervised methods of sanitation employed in any manufacturing. Delivered over to the tender mercies of that miraculously constructed machine the "iron chink," a twenty-pound salmon is transformed into the canned product with incredible celerity.

Such a little while ago he was disporting in the waters of the Pacific, or cleaving the brackish currents of the river mouth,—and now, presto, he is caught, clipped, cleaned and canned almost before the final convulsive movement of his tail has evidenced his surrender. Long as his wanderings have been before the meshes of the nets closed about him or he found himself packed in the trap with his brethren, he is booked for a much longer journey now. For the Pacific Coast salmon go wherever sails stretch, steam carries and the sons of men abide.

An empty can of salmon is the sign-manual of the harvest of the seas. You may note one of them high up on a mountain-top, where the bald peaks stare straight into the clouds, and ponderous glaciers drip in icy streams through the livelong years; you may come across them at the bottom of some dingy mining shaft, hundreds of feet below the surface of the earth, the once bright label blurred with the dust and debris of a remote underworld; you may find them on the seashore, a mockery of the once lusty fish who sprang from gray-green hollows of the brine and lived their days with wind and sea, with sky and stars.

There is no sowing for this harvest, unless the seasons, scattered by an invisible Power over land and sea, have conspired to bring from spaces of mystery and doubt, the weaving web of these strange fish down to the ports and pathways where the fishers are waiting for them. When the "run" has passed, the sea takes up its burden again, the rivers are unscarred by the keels of the fishing-boats or the trail of the nets.

Imagination has played a leading part in this story of the salmon, for the keen sense of the trader and business man soon saw in this yearly migration of the fish a possibility of traffic, far-reaching and important. Imagination fired the speculative spirit, speculation hazarded the capital, capital laid the plans and now—you may travel far and wide, but you will not lose the result. For in all climes and countries the finished product has burrowed its way to the shelves and counters of commerce.

Wherever the Union Jack flies, or for that matter,

the flag of any nation, you can buy canned salmon. In the shadow of the pyramids, by the minarets of the unspeakable Turk, in Arctic zones and under the burning suns of the tropics, there is the label; there are the goods. It would be as remarkable to find a civilized man who had not eaten or heard of canned salmon as it would be to find a noble red man who had never heard of whiskey.

Figure, then, what a feat of trade it is to establish firmly a staple food for the world. The Russian has his caviare, the Esquimaux his blubber, the Boulevardier his pate de fois gras, the Islander his banana, the Englishman his roast beef, the German his wienerwurst, the Yankee his pie, and the merry brown cannibal his roast missionary; but some time or other they all eat canned salmon.

Immutable and eternal as is the sea and its myriad wonders, there is nothing more problematical and baffling than the four-year run of the fish, when they come in droves through the water. As many as have been the scientists and experts who have risen to explain this marvel, there has always remained the irreducible dregs of the puzzle. Some one has invariably been called upon to explain the explanation.

In the annual reports of British Columbia's traffic and commercial productions the salmon fisheries occupy a prominent and an important place. The years vary, with the fourth years yielding their usual unusual quota of fish. Many hundreds of thousands of dollars are invested in the business, and, in the brief season, swarms of fisher-folk plough the straits, bays and river-mouths for the tumbling salmon.

How long will it last? The Government has built hatcheries and imposed wise regulations, and given bounties for the destruction of the villainous hair-seals that prey on the salmon. Some "lean" years occasionally give rise to rumours that the salmon are gone. Then will come in with the tide such a sweep of glittering scales, such an overpowering rush of salmon that fickle rumour is forgotten, and the news is spread broadcast that the fish are thicker than ever.

And, finally, the moving-picture genius, taking up with camera and sunlight the flickering warp and woof of the trade, descends and copies the life and motion of the drama, and reproduces the very action and spirit of the various scenes. And now the nets fill, the "brailer" is cast into the traps, the fishers heave and tug, and the harvest of seas, many-sized and struggling leaps and bounces in the last fight for liberty. The scows fill and depart, the machinery in the canneries whirls past with its remorseless grind and swirl, and the workmen pass and repass at their tasks.

Photo, Broadbridge) COOLING ROOM, SCOTTISH CANADIAN CANNERY.

And the very magnate of the trade himself, seated at leisure in the cushioned seats of a modern theatre, may mark in unmistakable accuracy, in these last curios of the photographer's art, the beginning and the ending of the harvest of the seas.

SHANGHAIED FISHERMEN.

Shanghaiing is charged in an indictment brought by the Federal Grand Jury at Seattle against Henry Bune, J. T. Kikutake and H. H. Reid, employees of the Northwest Fisheries Co. The three are accused of shanghaiing several fishermen last year and mistreating them aboard fishing schooners.

REFINED FISH.

Bob Davis, editor of Munsey's, was at the Hotel Cecil, in London. Glancing over the menu one morning at breakfast, he said to the waiter:

"What is a whiting?"

"I know that," said Davis: "but what kind of a fish? How does it taste?"

The waiter pondered the matter for a moment.

"I'll tell you, sir," he said: "A whiting is like a 'addock, sir—only more refined."

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company).

The market keeps well supplied with all kinds of fish. In fact, the fishing in general has been above the average so far, and as a result prices have been easier. Gaspe salmon has been a glut on the market and has sold as low as 8c. per lb., which is a record low level. Demand is fairly plentiful and distribution on the increase. Codfishing so far has been only fair in a few sections and pretty good in others. The export markets are anxious to get supplies and quote big prices, but it is expected a reaction will soon take place if production keeps up. No new pickled herrings have been offered yet. Pickled mackerel is quoted very low. Large hauls of this fish have taken place and large supplies are now available. The trade in prepared and boneless fish is slow, while it is fairly active in the canned lines, being stimulated by camping, outing and summer resort trade.

Fresh Fish.

Mackerel	per lb.	.10
Gaspe Salmon	per lb.	.13
Halibut	per lb.	.11
Haddock,	per lb.	.04
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Buck Shad, piece	per lb.	.22
Blue fish	per lb.	.12
Live Lobsters	per lb.	.22
Alewives, apiece	per lb.	.02
Whitefish	per lb.	.12
Pike	per lb.	.08
Perch	per lb.	.08
Bullheads	per lb.	.12
Roe Shad, piece	per lb.	.60

Canned Salmon

Red Sockeye Salmon, 4 doz. case	9.00
Red Cohoes Salmon, per cs. 4 doz.	6.50
Pink Salmon, per cs. 4 doz.	5.00

Smoked Fish.

Haddies, per lb.	.08
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrings, box	1.00

Frozen Fish—Sea Fish.

		Prices.	
Salmon—Gaspe, large, per lb.		.12	.13
Salmon, Red—Steel heads, per lb.		.12	.13
Salmon, Red—Sockeyes, per lb.		.09½	.10
Salmon, Red—Cohoes or Silvers, lb.		.08½	.09
Salmon, Pale Qualla, dressed per lb.		.09½	.08
Halibut, white western, large and medium, per lb.			.08
Mackerel, Bloater, per lb.		.07	.08

Frozen Fish—Lake and River.

White fish, large	per lb.	.10	.11
White fish, small Tulibees	per lb.	.06	.06½
Dore, dressed or round	per lb.	.08½	.09
Pike, dressed and headless	per lb.	.06½	.07
Pike, round	per lb.	.06	.06½

Pickled Fish.

Salmon, Labrador, Tierces, 300 lb.	20.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C., Brls.	15.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.50
Herrings, Labrador, Half Brls.	3.50
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs	1.25
Holland Herrings, imported milkers, half brls.	6.50
Holland Herrings, imported milkers, kegs.	.75
Holland Herrings, mixed, half brls.	6.00
Holland Herrings, mixed, kegs	.65

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brl.	
No. 1 Green Cod, small, brl.	
No. 1 Green Cod, Haddock, medium, brl.	
No. 1 Green Cod, Haddock, small, brl.	
No. 1 Green Cod, Pollock, medium, brl.	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's		7.50
Dried Pollock, medium and large, 100 lb. bund.		7.50
Dressed or skinless Codfish, 100 lb. cases		7.00
Boneless Codfish, 2lb. blocks, 20 lb. boxes, per lb.	.06½	.07½
Boneless Codfish, strips 30 lb. boxes		.10
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box		1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes		.13

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysers, per barrel	
Malpeque shell oysters, selected, C.C.I., per barrel	12.00
Malpeque shell oysters, selected J.A.P., per barrel	
Malpeque shell oysters, selected XXX, per barrel	
Malpeque shell oysters ordinary, per barrel	
Malpeque shell oysters, caraquets, per barrel	
Clams, per barrel	6.00
Mussels, per barrel	5.00
Live Lobsters, medium and large, per lb.	.22
Boiled Lobsters, medium and large, per lb.	.25
Lobsters—New Crop—1 lb. flat tins, per case	24.00
Lobsters—New Crop—½lb. flat tins, per case	25.00

A FISHERIES INFORMATION BUREAU

By COLIN McKAY

Greater knowledge of the general conditions governing the migrations and habits of fish as well as the more specific conditions bearing upon the problem of capturing them would be an important aid in promoting the development of the fisheries on sytematic lines. The United States, Great Britain and other countries have vessels carrying scientific men who devote their time to studying the movements and habits of fish of various kinds and acquiring knowledge which may be made of practical advantage to the fisherman, and officials of the Dominion Fisheries' Department have been considering the question of fitting up a vessel to do similar work in Canadian waters. Perhaps it might be well for the Fisheries' Department to undertake the work of developing a body of knowledge in regard to these matters through the employment of methods similar to those which have been found so successful in connection with the work of the weather bureaus of various governments; that is, by enlisting the voluntary co-operation of those directly interested.

Many fishing skippers probably know how the weather bureaus of the British or American governments obtain the information embodied in their monthly pilot charts. These bureaus issue weather report forms—little booklets about the size and shape of a check book—and these forms are supplied to ships of all kinds for the asking. As in a ship's log book each page is divided and subdivided into spaces, under such heads as: wind, sky, weather, temperature of water, temperature of air, barometer, remarks, etc., etc. There is a space for latitude and longitude. Under the heading of wind there is a space for recording the direction and the velocity according to the Beaufort scale.

All observations recorded in these weather report forms are made at Greenwich noon. A ship's officer soon develops the habit of looking for Greenwich noon, and in from three to five minutes one can figure out his latitude and longitude, and fill up the forms. All the entries required are made by means of simple abreviations. Under winds the entry may be N.W.3, and under sky c,5. which means the sky is cloudy and about half covered.

When a ship reaches port the weather report forms are handed to the custom house or mercantile marine office, or if you are using the forms of the Washington bureau and are at a Canadian port, to the American consul. Being sent to the Weather bureau the observations as recorded from day to day are plotted on huge charts. These observations made by thousands of ships sailing the ocean or oceans, in conjunction with reports of similar nature received from lighthouses and selected stations on land, are the raw materials of the science of meteorology, and the basis of the pilot or weather charts issued every month. Masters of ships, whose officers aid the work of the weather bureaus by making such observations are supplied free of charge with all pilot charts and other publications issued.

Can there be any doubt that by adopting the same plan much information could be obtained which would eventually prove of great advantage to the fishermen? Just what the composition of the printed forms that should be issued to the fishermen would be is a matter for the officials of the Fisheries' Department to arrange, but among the various items of information which they should be asked to supply would probably be the following:

Latitude and longitude, or, in case of boat fishermen, position by bearing from headland or lighthouse; direction of wind and condition of weather; temperature of air and also of water; state of tide or currents; nature of fishing gear being used and kind of fish sought; number of fish captured and bait used; whether fish were in good condition or not; what the fish had been feeding on as shown by an examination of their stomachs; whether dog fish or bait were in evidence; remarks as to general conditions, apparent movements of fish, or to samples of bottom brought up by trawls. Observations dealing with these and other matters recorded from day to day, and sent to a central bureau to be plotted on charts, classified and studied, would before many years develop a body of information about the movements and habits of fish of various kinds, from which generalizations of great value to fishermen could be made. In a few years such a bureau would be able to issue monthly charts showing average fishing conditions in different localities, similar to the charts issued by weather bureaus; and as these charts would embody the experience of hundreds or thousands of fishermen under all sorts of conditions they should prove of great practical advantage to fishermen. In fishing as in anything else experience counts, and the results of many experiences can and should be recorded and classified, and converted into scientific knowledge available to all. Some skippers make big catches year after year; and they are not merely lucky, though they may be lucky in the sense that they have had experiences which enable them to make better guesses as to where to strike fish. Mainly, however, their luck consists in superior powers of observation and deduction, a greater faculty of generalizing their own experiences and the experience of those with whom they swap yarns about fishing. And under present conditions the "killers" are not prone to impart their fishing lore to others.

Probably the idea of pooling experiences may not appeal to all the fishermen at the present time. Probably before they are ready to co-operate in the working out of the plan here suggested, some educational work will have to be done amongst them, some effort made to convince them that the promotion of the interests of the industry as a whole will be the best interest of all engaged in it. But anyone who has taken note of the revolution which has been recently going on in all forms of business can hardly doubt that the fishermen can be brought to realize the importance of the principle embodied in the maxim, "each for all and all for each."

Some years ago when the maxim that competition is the life of trade was a fetish of business men, the average manufacturer would have laughed at the idea of sharing his experiences with any of his competitors in the same line of business. But what do you find today? Read a report of the proceedings of any manufacturers' convention, pick up any trade paper, and you will find men telling their "competitors" how they reduced costs of operation here or extended sales there, voluntary offering information respecting the solution of some technical problem which if kept a

secret would give them an advantage over their competitors. And why? Simply because they have arrived at that view that what helps the industry as a whole helps everybody identified with it. One need not go outside the fishing industry for an illustration of the advantage which the principle of co-operation possesses over that of competition. Everybody engaged in the fishing industry is interested in learning and applying the best methods of curing fish, for the simple reason that a man who puts a fine quality of fish on the market is bound to find a restricted demand if somebody else by putting an inferior quality on the market has created a prejudice against fish generally in the minds of consumers. And similarly every fisherman whether or not he be a big "killer," able on account of his superior knowledge or better co-ordinated experiences to make more money than others, is interested in developing scientific knowledge about the fisheries which will enable fishing operations generally to be conducted with more assurance of success and with less waste of time and energy, not only on the principle of general averages, but because the solution of the problem of enlarging the markets for fish by popularizing it as an article of diet depends to a large extent upon increasing production and assuring a steady supply. And besides the very qualities which now enable a fisherman by generalizing the more or less haphazard experiences of himself and others to become a highliner, would, if he were in possession of a systemized body of knowledge representing the experiences of thousands of fishermen, enable him to utilize that knowledge to better advantage than his competitors and continue in the role of a big killer. If the proposed plan of enlisting the co-operation of the fishermen in developing knowledge of the fisheries has any value it should be adopted by the fisheries departments of both the Canadian and American governments, and as in the case of the weather bureaus the information secured should be exchanged and co-ordinated to the end that the results might be more scientific. At the same time the government should equip a vessel, like that maintained by the Massachussetts Fishery Commission, for the special study of the fisheries by scientific men, for their work would serve to complement the information which would be obtained from the fishermen, and help in establishing principles for its interpretation.

UNITED STATES TREASURY DECISIONS.

Notification of the Treasury Decisions of the United States include the case of United States duty upon fish which will be of interest to certain Canadian exporters. The case of Strohmeyer & Arpe Co. v. United States (No. 1345) was decided by the Board of United States General Appraisers, as follows:—

Fresh Mackerel Packed in Ice Packages.

"The merchandise does not come within the es nomine designation of fresh mackerel in paragraph 273, Tariff Act of 1909. It was properly assessed as fish in packages of less than one-half barrel, dutiable at 30 per cent. ad valorem under paragraph 270, Act of 1909."

The appeal was heard before the United States Court of Customs Appeals on May 28, 1914. Martin, Judge, delivered the opinion of the court in part as follows, and the conclusion was given as below:—

"The merchandise involved in this case was reported by the appraiser to be 'fresh mackerel packed in ice in packages containing less than 100 pounds (the regular half-barrel quantity).' The appraiser returned the same for duty as fish in packages of less than one-half barrel dutiable at 30 per cent. ad valorem under paragraph 270, Act of 1909. Duty was assessed upon the importation in accordance with this return.

The importers duly filed their protest against this assessment, claiming duty upon the merchandise at the rate of 1 cent per pound under the provision for 'mackerel.....fresh,' in paragraph 273 of the Act of 1909, or alternatively at three-fourths of 1 cent per pound as fish, smoked, dried, salted, pickled, or otherwise prepared, or at 1¼ cents per pound as fish, skinned, or boned, under same paragraph.

"The protest was submitted without evidence to the Board of General Appraisers and the same was overruled, from which decision the importers now appeal.

"The following is a copy of the relevant part of paragraph 270 and of paragraph 273 in full:—

"270. ..... Fish in packages, containing less than one-half barrel, and not specially provided for in this section, thirty per centum ad valorem: .....

"273. Fish, fresh, smoked, dried, salted, pickled, frozen, packed in ice or otherwise prepared, for preservation, not specially provided for in this section, three-fourths of one cent per pound; fish, skinned or boned, one and one-fourth cents per pound; mackerel, halibut, or salmon, fresh, pickled, or salted, one cent per pound.

"We hold, therefore, that mackerel, salmon and halibut, when frozen, or packed in ice, are not dutiable as 'mackerel, salmon and halibut, fresh,' but fall within the terms of the opening clause of paragraph 261 and are dutiable at three-fourths of one cent per pound, as claimed. The protests are accordingly sustained and the decision of the collector reversed in each case."

The whole case will be found in the Treasury Decisions No. 24 of Vol. 26, June 11, 1914, of which copy can be seen by interested parties in the department.

TRADE INQUIRIES.

Since the publication of the last Weekly Report there have been received the following inquiries relating to Canadian trade. The names of the firms making these inquiries, with their addresses, can be obtained only by those especially interested in the respective commodities upon application to: "The Inquiries Branch, the Department of Trade and Commerce, Ottawa, or the Secretary of the Canadian Manufacturers' Association, Toronto, or the Secretary of the Board of Trade at London, Toronto, Hamilton, Kingston, Brandon, Halifax, Montreal, St. John, Sherbrooke, Vancouver, Victoria, Winnipeg, Edmonton, Calgary, Saskatoon, and Chambre de Commerce, Montreal.

557. **Salmon.**—A leading firm in Stettin, Germany, engaged in the fish importing business, and controlling also the only cold storage facilities in the port, is open to negotiate with British Columbia shippers of mild-cured and frozen salmon with the view of developing the market in eastern Germany on mutually advantageous terms. Highest financial standing.

562. **Fresh Salmon.**—A broker in the Riviera district wishes to investigate with producers and exporters of frozen salmon possibility of export to France.

PLAN TO SALT AND PICKLE SURPLUS SOCKEYES

A proposal that the surplus of the sockeye salmon catch of the big years be cured and salted by the fishermen, is being advocated by Mr. William Dauphinee, who is seeing the co-operation of the Board of Trade that during the big run, a boat will catch from 500 to 1000 fish but that the canneries will not accept more than one to two hundred fish from each fisherman. The result is that thousands of good fish have to be thrown overboard. From twelve to fifteen thousand barrels could be marketed by the fishermen.

That this is as it should be, we do not for one minute doubt. But the question arises as to the marketing of this great quantity. So far Canada consumes at the most a few hundred barrels and the markets of the U. S. A. are well supplied by the Alaska packers. Many fishermen have attempted to pack the sockeye salmon in barrels but for obvious reasons have not as a rule attempted the same thing another season. Their market is not large enough to permit very profitable operation.

That salmon in barrels is not packed largely in British Columbia is a statement open to correction. The mild cured business is one increasing every year. But the sockeye salmon does not lend itself to mild curing owing to the fact that the buyers look for larger "sides" than it is possible with this species, the sockeye side running to about 5½ lbs. at the most, as against the 10-15 lb. sides required for mild curing.

If in 1917, the next "big year" the above plan were followed and there were twelve thousand barrels paced, we are inclined to think that the loss all around would be very large. In the first place to get the market it would be necessary to go after that of the Alaska packers. Undoubtedly in the fresh and frozen state the sockeye is superior to the Alaskan fish, but whether this same superiority will hold up in the pickled state is open to question. Alaskan salmon has been offered as low as $5.00 per barrel of 200 lbs. f. o. b. cars Seattle, and graded fish at that. No Fraser River fisherman would think of offering his lot of barrels to the carload shipper to permit equal selling with the Alaskan fish. He would have to work at a dead loss. There seems to be no other market for a quantity such as suggested in the above clipping for we may be sure that the world has been searched pretty thoroughly by the Alaskan packers. To sell at a higher price on quality will be a very hard uphill job. To the average storekeeper living distances from the Salmon producing countries, all salman are alike. Price alone counts with him. True we might get after the West India markets which import Atlantic pickled salmon. But this business is all on the consignment basis, which is not to the taste of the Pacific shippers. Even if we did ship to the West Indies, such heavy consignments would soon smash prices all over.

The Alaskan packers can afford to market the fish at the prices they do, owing to their larger buying capacity, which means cheaper supplies, owing to their up-to-date and labour saving devices, and also to their cheap transportation. They also pack the pickled salmon as a by-product. The sockeye fisherman would want to get besides the time and labor put into his goods, a substantial profit.

No, we are afraid that Mr. Dauphinee's proposal is not at all practical. There is no need to throw the fish that the canneries will not take overboard. Quite a short distance from the canneries is a fertilising plant that turns the refuse from the canneries into fertiliser and also salmon oil. This plant is large enough to take care of what is offered it. The price paid may not be large, but in the long run we think that the fishermen with a surplus of fish will be ahead of the game by delivering to the fertiliser rather than pickling vast quantities of fish that has no market.

These conditions will not always apply. The time will come when there will be no surplus of fish in the boats. The experience of the canners of the 1913 pack will tend to increasing the output in 1917, the next big year. Again, with shipping facilities arranged on the development of the country, and with increased populations, the demand may be such that a few thousand barrels will be disposed of. Cold storage facilities will also take a very great part of the surplus offering.

The salmon industry of the Northern Pacific will follow that of the Cod of the Atlantic. Up to a very few years ago the cod was cured in the hard dried state alone. Now it is canned, boned shredded and packed in all sorts of forms. The same thing will happen to the salmon. As a starter a Prince Rupert packer, Mr. Shrubsall is putting up a line of goods that attracted most favorable attention at the Toronto 1913 Exhibition. His flaked and boneless salmon bids fair to be an article that will find favor with all grades of buyers.

These remarks are based upon actual experience and we give them without prejudice. The furtherance of the fishing industry depends upon the men who catch th fish—and the encouragement given these fishermen. By all means give them all encouragement to make use of their entire catch, but it is better not to suggest to them that they pack goods that will not be marketable. The fish business these days does not embrace all grades as one. The great tendency is to grade as much as possible and so get full value for each fish. But how can one offer a thousand barrels of pickled salmon and get the full value for each one, when these thousand barrels have been packed by perhaps one hundred different fishermen?

This plan of Mr. Dauphinee's is quite practical when there is a market, and provided that the fishermen give their surplus catch to some large packer who can put up the fish in uniform packages, uniform brine and uniform weights. Otherwise it will mean besides fish wasted, barrels salt and time all gone for nothing.

The mackerel fishermen of Norway and Sweden have formed a Union with the object of making stricter selections in the grading of fish. Their products will all come into the trade under the trade mark of the North Sea Mackerel Fisheries Union. The sales agents for the Union are Joachim Hansen, of Bergen, and Franz Witte & Co., of Gothenburg. Louis Meyer Trading Co., New York, will handle the goods in America.

Phenomenal catches of mackerel are reported from all points on the Atlantic Coast. Mackerel has in consequence been selling very cheap, and this high class fish food is now within the reach of everybody.

LOUISBURG, CAPE BRETON, AND ITS ADVANTAGES AS A BASIS OF FISHING OPERATIONS

By L. H. Martell, B.A., B.C.L., Barrister-at-Law

Louisburg, linked indissolubly as it is with the history of the past, has a promising future. Its past is intensely interesting from the part it has played in the history of nations, for the downfall of the "Dunkirk of America," as it was called, was one of the most important in that series of events which led to the final supremacy of the Anglo-Saxon rule in North America. The future of Louisburg undoubtedly lies in its development as a shipping port for the products of the mine and the manufactory, and its great possibilities as an important fish distributing centre. It is with its possibilities as a fish distributing emporium we are chiefly concerned at the present moment.

The harbour of Louisburg is situated on the south-east side of Cape Breton. It is completely land-locked. It has an entrance of half a mile wide with deep water varying from twelve fathoms at the entrance to eight fathoms on a line of the fairway, and seven fathoms on the same line to within two cables' lengths from the shore. The tides have a rise of but five feet at at springs and four feet at neaps. The Sydney and Louisburg Railway, which runs between Sydney and Louisburg, connects with the I. C. R. and thus Louisburg is given railroad connection with the leading cities of Canada and the United States. The rail distance from Louisburg to New York is 1,101 miles; from Montreal 902 miles, and from Ottawa 1,014 miles.

A United States Secretary of State in presenting a few years ago the draft of a proposed treaty between Great Britain and the United States, stated "that the day was not far distant when the Americans would have to make use of a Canadian port for outfitting vessels, and drying their fish, as the American people were now demanding slack-salted hard fish, which only could be secured by using a Canadian port and vessels making short trips" And that was an exact statement of fact.

Nature has planted Louisburg in the centre of the North Atlantic fishing grounds and, with railway and steamboat connection, it must eventually become a great distributing port of the fisheries for Canada and the United States. The following table of distances from Gloucester, Mass.; Lunenburg, Nova Scotia, and Louisburg, to the chief fishing grounds demonstrates the assertion:

Bank.	Gloucester. Miles.	Lunenburg. Miles.	Louisburg. Miles.
Virgin Rocks, Grand Bank of Newfoundland	868	574	370
Green Bank	699	410	206
St. Pierre Bank	651	350	156
Artimon	553	251	91
Banquero	555	267	120
Misaine Bank	519	223	56
Canso Bank	468	170	50
Middle Grounds	450	156	83
Sable Island Bank	405	132	150
Curdo Bank	516	221	14
Eastern Light, Scatarie	520	226	14
Cape North	589	295	69
Bradele Bank, on the North Bay fishing grounds	623	328	201

For several years past the great bulk of fish taken by the "bankers" in spring and autumn has been caught off the coast of Cape Breton, Misaine, Scatarie Island and Cape North banks being the fishing grounds most frequented.

Vessels operating from Louisburg could make voyages every fortnight or three weeks to the fishing grounds and be able to land their catches before they got over-salted, as is often the case when three or four months are necessary to make a trip, as is common when operating from Gloucester, Mass. Owners would as a consequence be able to know what their vessels were doing, fish would be sold at a better price, and a saving in weight, and said owners would realize their returns and have the use of their money months before the Gloucester vessels could get home.

Mackerel can be taken off the coast of Cape Breton in large quantities and can be shipped by railway from Louisburg to Boston, Montreal, Toronto and other cities in the shortest possible time.

The herring caught in June and July off the south coast of Cape Breton are prime fish—the largest and fattest known—but, as a general rule, they are improperly cured, as the fishermen often either permit them to remain in the boats until they are scorched by the sun and become soft, or, on the other hand, slack-salt them. If these fish were bought from the fishermen immediately after they are taken from the nets and properly cured and salted in accordance with the proposed "Fish Inspection Act" drafted by the writer in collaboration with Mr. J. J. Cowie, of the Department of Marine and Fisheries, Ottawa, and Mr. Cowie, who is a most capable man, and the official of the Department most cognizant with fishery matters, set to work, the herring industry could be worked up to immense proportions at Louisburg. The putting into effect of the proposed Act would cause boats to be stationed at different places during the herring season (from the 6th of June till the last of July), follow the fishermen to their nets and then, before the fish get salt or the sun affects them, have them cured and salted in accordance with the proposed "Fish Inspection Act."

Any quantity of ice can be stored at Louisburg at a cost of fifty cents per ton. A large cold storage plant could be established at Louisburg and stored with bait secured in Cape Breton waters and herring from Fortune and Placentia Bays, Newfoundland. Thus fishing vessels would be able to obtain bait at all seasons of the year when such would otherwise be unsecurable without delay. It being the nearest port to Newfoundland and the place from which the United States fishing vessels invariably take their final departure when on salt and frozen herring trips, vessels could make two or three trips during winter laden with frozen herring.

Following the establishment of the Dominion Coal Company by an Act of the Nova Scotia Legislature passed in 1893, the said company built an immense coal shipping pier at Louisburg, from which vessels of the largest dimensions are loaded by the aid of the most improved appliances with unusual dispatch. The coal shipped from Louisburg is of the best class. Hence coal in abundance can be secured for all purposes in which it would be needed in connection with the fish-industry, whether that be for the bunkering of steam fishing craft or the generating of steam for the purposes of a modern curing and packing establishment.

In short, Louisburg is so situated as to be one of Canada's greatest fishing centres.

THE ATLANTIC FISHERIES

YARMOUTH, N. S.

(From Our Special Correspondent).

Last month we boasted that we had not been bothered very much in these waters with dog fish, but even when the letter was being written the pest had struck in in great numbers on the off-shore grounds, greatly interfering with the vessels. Closer in-shore they have not been so prevalent and the boats have not been bothered to any great extent. Further up the bay the waters are still clear of them, and in consequence our vessels have gone up about to the headwaters, the Eddie James, Captain John Simms, having taken a fare away up off Hampton. At the present time several of the vessels are haking between Long Island and Grand Manan until such time as the dog fish show a little sign of moving away to distant fields. One of the boat fishermen, fishing a little farther off-shore than his fellows, ran a trawl and when he came to reap his harvest got one whole fish, although almost every hook held a head or a partially devoured fish.

Early in the month the directors of the Gateway Fish Company, Limited, held their first regular meeting and elected the following officers:—

President—W. H. T. Spinny.
Vice-President—G. Prescott Baker.
Sec.-Treas.—Oscar L. Davis.
Managing Director—J. S. Gray.

They have been successful in securing the service of Dalton Peters, of Westport, as wharf foreman and superintendent. Although this company has only been in operation for a month they have already outgrown the capacity of the smoke houses on their property and are erecting another with a capacity of 3,500 fish (count) or about 12,000 pounds.

During the month the local fishing fleet has again been increased. Henry A. Amero has purchased the schooner Eddie J. from Tiverton parties and placed her in charge of Captain d'Eon. This schooner returned on the 28th from her first banking trip with 20,000 pounds. Another addition was the sloop R. G. Hervey, from Shelburne county; the Silver Spray, from Argyle, and the Charles E., from Woods' Harbour. They are all in commission.

The first shipments of lobsters from this district were fairly large, but a number of small shipments from the Bay of Fundy have been going forward all the month. The season on the whole was a fairly good one.

The greatest activity this month has been in green and dry fish. Amero's vessels have all been in and landed good fares. The boats are doing wonderfully well, but Yarmouth is not getting the full catch. Sandford and places along the shore where there are a number of small boneless fish factories are making a bid for a portion of the trade—and getting it—but it does not take very much, comparatively speaking, to glut those markets. They have been paying a little better price, averaging 2½ cents, while in town they have only been paying 1¾ cents. Not much fresh fish, other than mackerel and salmon and a little halibut, is going forward to Boston now, for two reasons. One is that the weather is too warm to ship fresh fish in good condition unless in cold storage (which the Boston steamers have not got), and the other is that the Boston market at present is away down.

The mackerel traps have had better luck than for several years as regards weather conditions, and the fishing could have been worse, although there is much room for improvement. However, they are taking a few mackerel every day and the owners feel encouraged. The largest mackerel ever caught here was taken last week in the Cranberry Head trap. It measured 25½ inches in length and weighed 5½ pounds.

Speaking of dogfish, it is interesting to note that the Boston Fish Bureau have been showing samples of smoked dogfish during the month, put up by Collins, Lee Co., of Chelsea, Mass. These samples had been prepared under instructions of the United States Bureau of Fisheries, and were shown in order to encourage fishermen and fish merchants to introduce dogfish as a food fish. It is believed that it will eventually become recognized as a valuable acquisition to the list of food fish.

During the month the exports have been as follows:

Live Lobsters, crates	2,189
Dry Salt Fish, drums	499
Boneless Fish, boxes	2,227
Fresh Haddock, cases	3
Pickled Herring, barrels	3
Periwinkles, barrels	25
Salt Mackerel, barrels	6
Canned Lobsters, cases	816
Fresh Salmon, cases	348
Fish Waste, barrels	148
Pickled Fish, cases	232
Fresh Mackerel, barrels	3,030
Sturgeon, cases	9
Fresh Fish, cases	44
Halibut, cases	90
Pollock, cases	22
Eels, barrels	6
Finan Haddies, boxes	12
Albacore (Tuna), cases	2
To London:	
Canned Lobster, cases	874
To Hamburg:	
Canned Lobsters, cases	601
To Havana:	
Dry Salt Fish, drums	163

As this month ends the first half of the present year, a brief review may not be amiss. The six months have seen quite a revival in the fishing industry of this port. Never in the memory of the present generation have the waters of Yarmouth harbour presented

such a lively and picturesque scene as they do now when the boats and vessels are on their way in from or out to the grounds. No doubt the opening of the American market is the sole cause of this revival, and we would feel it more directly than any other place because we are in such close touch with the Boston market—no doubt the largest on the Atlantic coast. For five months out of the first half year the live lobster fishing is the principal branch. That part of the season to March 1, as compared with the previous season showed an increased quantity of shipping lobsters of about fifty per cent. The spring portion of the season from March 1st to May 30 showed a decrease in canning lobsters of 25 per cent. The production and shipments of live lobsters for the whole season remains practically the same, but there was a decrease in the quantity of lobsters canned between Halifax and Yarmouth. The quantity packed amounted to 25,000 cases for the winter and spring season.

The weather of the spring season was the worst experienced in twenty years, there being a continuous succession of heavy seas and strong winds. These conditions left little opportunity to fish, which accounts for the shortage.

The markets for live lobsters in the United States have held their own up to the previous year. For canned lobsters the market is very quiet. The European market is also quiet, more particularly in France, where the buying futures is very small. There were the usual shipments made during the season for the European trade, largely through Halifax. Most of the canned lobsters put up on the South Shore of Nova Scotia go abroad, but comparatively few are shipped through Yarmouth, as the Halifax steamers provide more direct communication. Very few canned lobsters go to the United States from here—that market being supplied from Prince Edward Island, Cape Breton and the North Shore of New Brunswick.

Yarmouth county, however, has a large share in supplying our American cousins with their fish food. Look at the exports for the six months:

Live Lobsters, crates	20,980
Fresh Fish, cases (500 lbs.)	2,034
Halibut, cases	421
Cod Oil, barrels	21
Smelts, boxes	1,285
Eels, barrels	81
Salt Mackerel, barrels	570
Canned Lobsters, cases	8,245
Boneless Cod, boxes	21,713
Finnan Haddies, boxes	1,130
Dry Salt Fish, drums	14,319
Pickled Fish, cases	1,093
Clams, barrels	1,833
Hake Sounds, bags	48
Dulse, bags	7
Glue Stock, barrels	31
Fish Waste, barrels	1,657
Salt Herring, barrels	992
Fresh Salmon, boxes	515
Bloaters, boxes	2,173
Cod Fillets, boxes	10
Fresh Cod, cases	5
Fresh Haddock, cases	9
Fresh Pollock, cases	22
Albacore, cases	2
Perriwinkles, barrels	64
Dry Pollock, quintals	34
Fresh Mackerel, barrels	3,453
Scallops, barrels	½
Sturgeon, cases	11
Fish Skins, barrels	576

The valuation of these exports runs away up into high figures, as follows:

Clams	$ 1,250
Fish Oil	252
Fresh Salmon	15,965
Smelts	1,477
Canned Lobsters	148,410
Perriwinkles	128
Live Lobsters	403,865
Pickled Fish	42,651
Boneless Fish	48,954
Dry Salt Fish	128,872
Eels	739
Fish Waste	4,971
Salt Mackerel	5,700
Salt Herring	4,500
Fresh Fish	28,476
Pollock	500
Halibut	14,294
Fresh Cod	90
Fresh Haddock	75
Hake Sounds	96
Scallops	10
Sturgeon	165
Finnen Haddies	2,260
Fresh Mackerel	34,530
Bloaters	3,260
Fish Skins	900

DIGBY, N. S.

(From our Special Correspondent).

Large stocks of fresh fish have been coming in to this port recently, but for the present, hands have been taken off from the finnan haddie business to salt and dry the catch coming in. The next two weeks will see a resumption of the finnan haddie shipments to the West. Salt fish stocks are at a low ebb at present, and as much as $7.50 a quintal has been paid. The new season's fish now being prepared here should fetch a good price later.

Captain William Snow, in the Digby schooner Dorothy M. Smart, recently returned to port after making a trip halibuting in the Gulf of St. Lawrence. Scarcity of bait up north brought him back, but it is the Captain's intention to try his luck up north again. Captain John D. Apt, in the Digby schooner Albert J. Lutz, made a good trip off Anticosti—bringing some 40,000 pounds of halibut into Canso—from which the crew shared $80 a man. The Lutz is at present on her second trip.

Captain Harry Ross, a former Digby skipper, commanding the schooner Morning Star, of Gloucester, tried his hand at Gulf of St. Lawrence halibuting and made a dandy trip, stocking $4,600. The crew shared $122 per man clear. This was Captain Ross's first venture in northern waters and it is evident that his fish killing ability holds good anywhere.

After being out less than a week the schooner Quickstep, Captain Arthur Casey, arrived recently from a fishing trip in the Bay to the westward, with 75,000 pounds of mixed fish.

There were five hundred cases, or about one hundred thousand lbs. more lobsters canned in Digby Neck this season than last. There were also more live lobsters exported than last season.

Scarcity of bait is greatly interfering with fishing operations, particularly among the vessel fishermen who have to go far down the Bay for their trips. The boat fishermen are not so much handicapped, as they can secure enough for a day's fishing along the shore.

During May and June over 100 lbs. of gaspereaux have been caught in St. Mary's Bay. In Gibson's weir at Brighton Wednesday night 14 bbls. were secured and also 87 shad. This is the biggest catch of shad in a St. Mary's Bay weir for many years. Mackerel are also quite plentiful in the Bay, the weir catches ranging from one to five hundred each tide. The fishermen believe these good catches to be the result of Fishery Officer Torrie's efforts in prohibiting sawdust from entering the Bay via the numerous fresh water streams.

The three months close season for clams ended the last day of June, and Wednesday two hundred barrels went forward to the Boston market. A fleet of motor boats brought the clams to Digby Tuesday night from Port Wade, Goat Island, Clementsport and other places along the Annapolis River and Basin. For the next nine months this industry will give steady employment to the bread winners of many a home. The diggers receive one dollar a barrel and the average is three barrels a day for each man. Mr. Geo. W. Wightman, of the Whale Cove Trading Co., is the principal shipper.

Fishing is exceptionally good in the Bay of Fundy. The schooner Grace Darling, Captain Ansel Casey, arrived here with 90,000 pounds and the boat fishermen landed 20,000 pounds. The schooner Elmer, from a trip down the Bay buying from local fishermen, landed 11,000 pounds to the Maritime Fish Corporation, which also bought the trip of the Grace Darling.

CANSO, N. S.

(From Our Special Correspondent).

The lobster fishing season on this section of the coast came to a close on Saturday, June 20th. This is ten days shorter than the regular season, which is supposed to end the last day of June. In fact, several times during recent years at the request of many engaged in the fishery, there has been an extension to the middle of July. All of which has made the present season an unusually short one, and more particularly so as the month of April this year was a complete blank. Fishing during June was fairly good, but not good enough to overcome the handicap with which the season started. The majority of the men, after paying their help, their factory bill and other expenses, will have a very small balance to show for their spring's work, for it should be remembered that the time and work involved in lobster-catching takes in a much longer period than the actual fishing season, the making and fitting-up of gear being no small job. During late years an increasing number of men from Canso and vicinity have been going North for the lobstering season to Bayfield, Morristown and other points along the coast of Antigonish county and some to North Prince Edward Island. They fish—the Antigonish men—till the end of June. As in this section, they were handicapped by a late start, and also by a great scarcity of bait in many places. Fresh herring, the bait necessary for best results, were very hard to obtain. On the whole, however, I believe they have fared better than our local fishermen.

The Government steamer "Thirty-Three" has been busy collecting spawn along the coast from Whitehead to Mulgrave, for the lobster hatchery at this place. The hatchery has been open since the middle of April and in about a month's time will have some young lobsters ready for liberation.

The traps at White Point have been having a record spring, landing large catches of haddock, cod and mackerel. Boudreau's trap on May 30th had 10,000 haddock, etc., and has been getting many good fares since. Their stock is running new well up in the four figures. The Scott trap at French Point, however, further in the Bay, has only enjoyed one good haul of 6,000 so far.

About the middle of June the seining fleet reached this vicinity, where the mackerel seemed to halt for some time. Many good schools were captured, both by American and Nova Scotia schooners, the Helen G. MacLean, of Shelburne, and Nellie Viola, of Lockeport, doing particularly well. Capt. MacKenzie of the Nellie Viola sold his catches here, receiving at first 3 and 6 cents apiece for small and large, but later only 2 and 4. Large landings of tinkers on the American coast was largely blamed for the decline in mackerel prices. Capt. MacKenzie on Friday, the 19th June, enclosed a big school of pollock, which he brought ashore and salted. He intends to load up for home on these.

The cruisers Constance and Petrel have been very much in evidence here lately. They seem to feel quite at home here in the harbour or at the wharves.

On June 5th a heavy E. to S. gale swept along this shore, resulting in great loss to many local net fishermen who were drailing offshore. A number lost all their nets, considerably over 100 being carried away altogether. The "Thirty-Three" went out after the storm in an effort to recover some, but was unsuccessful.

The offshore handliners have been doing fairly well since June came in.

Much regret is felt and expressed at the closing down of the Canso branch of the North Atlantic Fisheries, as well as their numerous buying stations around the coast. This action became necessary through financial difficulties. The company had but recently erected in Hawkesbury one of the most modern plants for fish handling operations which, I believe, has not yet ceased buying altogether. The writer understands, from the very best authority, that Mr. Fader, the genial and capable manager of the branch at this place, if he can obtain sufficient capital, may enter the fish-buying ranks on his own account. It is sincerely to be hoped that the Canso plant will not be allowed to remain idle for any great length of time.

Early in June the Albert J. Lutz arrived at the wharf of the Maritime Fish Corporation with 40,000 halibut and 20,000 salt cod, which sold for 6c. per lb. for the former and 3c. for the latter. She sailed North again.

The Robinson Glue Factory recommenced operations about the middle of June.

ST. JOHN, N. B.

(From Our Special Correspondent).

The fresh fish market has been well stocked during the past month, and good prices have prevailed. During the Gaspereaux season the harbour fishermen made good catches of this fish, and though prices were not high, large quantities of Gaspereaux being sold for bait, the season was a profitable one. During the salmon season some of the local weir men as well as net fishermen made good catches, but taking the harbour fisheries as a whole, the salmon catch appears to have been rather light, though reliable statistics are not available as yet. Fair catches were made at

Lorneville and at other points on the coast, and the up-river fishermen appear to have been kept supplied with salmon, but few large shipments to other markets have been reported. In the retail market salmon have been selling at anywhere from 15 to 30 cents a pound.

As regards the shad fishing, St. John harbour fishermen say the season has been below the average, though exceptionally good catches have been reported on the Kennebecasis, with about the average catch on Lake Washademoak and other tributaries of the St. John river frequented by shad. There has been a good supply of shad on the local market. It is said that owing to good catches of Gaspereaux the harbour fishermen have had a fairly successful season. So far as the majority of harbour fishermen are concerned, the fishing season ended on June 30th, but the weirs will be kept up in the hope that sardine herring may strike in this way later on.

Wholesalers handling salt fish have good stocks in hand at present. Salt cod and haddock have been coming in freely from Bay ports. One dealer has a large supply of fish oil.

Wholesale quotations here are as follows:—

Small dry cod	4.50	to	4.75
Medium dry cod	6.25	to	0.00
Pollock	0.00	to	3.25
Grand Manan herring, half-bbls.	3.25	to	3.35
Smoked herring	0.14	to	0.15
Fresh haddock	0.03½	to	0.04
Pickled shad, half-bbls.	8.00	to	12.00
Fresh cod, per lb.	0.03½	to	0.04
Bloaters, per box	0.80	to	0.90
Halibut	0.10	to	0.15
Kippered herring, per doz.	0.00	to	0.90
Swordfish	0.12	to	0.13
Shad	0.20	to	0.25

NEW BRUNSWICK NOTES.

(From Our Special Correspondent).

Richard O'Leary, of Richibucto, stated recently that the lobster pack on the North Shore this season would probably be below the average. The reason for this is that during the first part of the season the weather was so bad that fishing operations were practically prohibited on most days. It does not appear, however, that there was any reason to complain of the supply of lobsters, as exceptionally good catches were occasionally reported from different points.

S. J. Walker, who has had charge of the shad hatchery at The Narrows, Lake Washademoak, reports that about one and a half million shad eggs were hatched out this season, and the fry returned in good condition to the waters near the natural spawning grounds. This hatchery, the first shad hatchery to be established in Canada, has been in operation for three years. The first year something over 80,000 shad eggs were hatched, and the output last year was about the same as this season. Men employed by the hatchery go round where the fishermen are catching shad, and strip the eggs from any shad caught which is ripe for spawning. The value of the hatchery lies in the fact that it supplements natural reproduction by utilizing eggs which would otherwise go to waste. It is interesting to note that the shad fishing on the Kennebacasis, where the hatchery was in operation three years ago, was much better this season than it has been for years past. As it takes shad three years to mature, this would indicate that the work of the hatchery in planting over 800,000 fry there three years ago materially increased the number of shad using that district for spawning purposes. Along the St. John river the shad fishing was about the same as usual, but fishermen reported that they never saw so many small shad as this season, again indicating that the hatchery is increasing the supply. Most of the small shad slip through the nets as soon as they are shaken, but next year they should be big enough to be stopped by the nets.

The fishery inspectors of the Maritime Provinces were in session at Moncton last month. Those present at the conference were Wm. Found, of Ottawa, superintendent of fisheries; Commander Wakeham, Donald Morrison, inspector for the North Shore counties; H. Harrison, inspector of the inland fisheries of New Brunswick; J. F. Calder, inspector for St. John and Charlotte counties; J. A. Mathieson, of Prince Edward Island, and Ward Fisher, Robert Hockin, and Mr. McLeod, of Nova Scotia. The inspectors went over the new Fishery Act and regulations with the idea of developing a thorough understanding on the part of all the inspectors, as to the exact meaning of the different sections, and their application. There was also a lengthy discussion as to the best methods to be adopted to prevent illegal lobster fishing in the close season, both inside and outside the three mile limit.

Sardine fishing in Charlotte county during June continued to present the erratic conditions noted in May. Good catches have been reported at different points for a day or so, and then the schools would disappear for a time. New Brunswick canners have, by paying high prices, managed to operate their factories now and then, but so far the sardine fishing has been light.

Bay of Fundy fishermen have done fairly well catching cod and pollock.

LUNENBURG, N. S.

(From Our Special Correspondent).

The spring trips of the Lunenburg banking fleet are now over for the season, as the whole of the fleet excepting a few vessels, who intend making the one trip, have arrived home between the 5th and 15th of the present month and landed their cargoes, as customary, among the fish curers, to be prepared for distribution among the exporters. The catch is the smallest known for many years, the total amounting to about 38,000 quintals, on an average of about 450 quintals to each vessel.

The general report of the fleet is the same in every case, namely, the weather conditions, etc., have been the worst ever experienced.

The price of codfish for this season has been the highest on record, namely, $7.50 for cod and $5.50 for haddock for the early spring landings, and while the price for the second spring landings is not yet definitely fixed, it will be higher than last season by at least $1.00 per quintal, which will offset to some extent the small catch.

The fleet are now down on the Newfoundland coast for the summer trips, and it is to be hoped the results will be much better than those in the spring. Of course, everything will depend on the bait supply. Caplin have been reported plentiful some days ago, and it is to be hoped they will hold on until the arrival of the squid, on which the fleet depend to complete their trips later in the season. Last summer, however, the squid were not very plentiful, and did not last long, thus hampering some of the fleet in procuring full catches.

The S. S. "Irthington," from Glasgow, landed a

cargo of salt from Trapani at the wharves of Messrs. Robin, Jones & Whitman, Ltd., of this port.

HIGH LINERS OF THE SPRING CATCH—LUNENBURG FLEET.

Vessel.	Quintals.
Clintonia, Mack	500
W. T. White, Knock	550
Muriel E. Winters, Winters	525
Cecil L. Beck, Beck	900
H. H. Mackintosh, Whynacht	700
Earl Grey, Corkum	500
Marian A. Silver, Silver	500
Lelanana, Cook	500
Elsie Porter, Eisenhauer	550
Douglas Adams, DeCoursey	500
Ada A. Saunders, Spindler	500
Marian Adams, Knickle	700
Henry L. Montague, Knickle	800
Phyles Westhaver, Westhaver	700
Carrie Hirtle, Hirtle	500
Ada A. Saunders, Spindler	500
Arcola, Knickle	550
W. H. Smith, Nass	500
W. M. Gardner, Backman	500
Vera E. Himmelman, Himmelman	600

ONTARIO FISHERIES PROTECTION.

The province of Ontario has for two years been breeding its own bass fingerlings for stocking purposes. This has been done by the use of breeding ponds, where hundreds of thousands of fingerlings have been bred. They are taken to the various lakes which are to be re-stocked and there they are deposited. The fishing has been so good that $20,884 was paid by non-residents for licenses to fish in our waters last year. This is important when it is considered that these people spend a large amount of money before they return home.

The experiment with bass having been so successful, the Government is extending its work of propagation by erecting a trout hatchery at Mount Pleasant, Brant County, where the bass ponds are located, and hopes to be in a position to distribute several million by next season, providing in this way additional sport for residents of the province and further inducements for visitors.

The value of the commercial fisheries has increased from $1,708,963 in 1905 to $2,842,877 in 1912.

The adequate protection that the waters of the province are receiving is shown by the fact that the protective service has increased from three patrol boats and three launches in 1905 to twelve patrol boats and twenty gasoline launches

SANTOS (BRAZIL) FISH MARKET.

(Special to Canadian Fisherman).

The market is at present in a very good position, owing to the small stocks held in first hands, and by the small dealers. The arrivals lately have been under the average, both from Canada and Europe, and the amount of Fish to come forward during the next few weeks is exceptionally small. Local prices at present are hard and will in all probability advance until the summer fish begins to arrive freely when, no doubt, we shall see a fall. Present wholesale selling prices c.i.f. for 1st quality codfish in tubs are ruling about 52s. to 54s., whilst European case codfish, 1st quality, is selling at 49s. to 51s.

JAMAICA FISH MARKET.

(Special to The Canadian Fisherman).

Kingston, June 30.—In the month of June prices have been the same as in the month of May, except that, inconsequence of this market being very much over-stocked with Newfoundland fish, sales have been made here at very much below the actual cost, and several lots of old fish are still in the hands of the merchants, who are endeavouring to dispose of them.

Herrings have been very scarce, no stocks being available, and the quotations recently from Newfoundland have been $4.25 f.o.b. St. John's and $4.50 f.o.b. Halifax for large herrings. Alewives are also in good demand, and prices appear to be advancing, due to the statement that the catch will be short.

Large mackerel are still quoted at $12.00 f.o.b. Halifax and medium mackerel at $8.75. Scale fish continues to be scarce and is quoted at the same price as last month. Smoked herrings are not obtainable, and salt salmon is still being sold at $12.00 f.o.b. Halifax.

LARGEST SALT CARGO.

Halifax, July 6.—With the largest cargo of salt ever to arrive at Halifax, the steamer Denaby, Captain Holmes, arrived in port last Saturday.

She had nearly 5,000 tons of salt aboard, which was consigned to A. N. Whitman. Captain Holmes reported a fair trip across. They sailed from Trapani on June 13.

NEW $2,000,000 FISHERIES CONCERN.

The Seacoast Canning Company has been organized at Eastport for the purpose of acquiring and renting fishing licenses, grants and rights. The capital stock is $2,000,000. Wheeler C. Hawkes, of Eastport, is president.

RIO DE JANEIRO FISH MARKET.

(Special to Canadian Fisherman).

The Brazilian import of salt and dried fish amounts to some 35,000,000 kilos annually. The chief countries of origin are Newfoundland, Norway and Great Britain, furnishing approximately 44 per cent., 33 per cent. and 8 per cent. respectively. At the present moment there is no Canadian fish on the market. The sales consist only of Scotch fish in the proportion of about 10 per cent., and Norwegian fish in the proportion of about 90 per cent. The best brands of Norwegian are now offered at 44s. per case of 58 kilos, c. i. f. Rio de Janeiro, draft at 60 days' date, this being the best cod caught in Norway. Inferior qualities cost 2 to 3s. less. Scotch fish arrives for the most part on this market on consignment. This brand at the present moment is fetching 42s. to 44s. for first quality cod in cases, as above. Ling is also imported and at the present moment sold at 36s. a case.

There have been received on this market several offers from Canada regarding the coming catch. Prices were:—

Codfish, 1st quality, tubs of 58 kilos net	52s.
" 2nd quality, " "	50s.
" 3rd quality, " "	48s.
Lingfish, 1st quality, " "	43s.
" 2nd quality, " "	41s.
" 3rd quality, " "	40s.
Haddock, tubs of 58 kilos net	40s.

Prices which, however, are at the moment unobtainable.

THE PACIFIC FISHERIES

British Columbia's Untold Wealth of Herring

A GREAT INDUSTRY WAITING TO BE DEVELOPED.

By F. J. HAYWARD.

This subject has been treated by many better men than the writer; it has also been written about until many people are sick and tired of the subject. Scientists have delved into the question and made long reports that point to the vast possibilities offering, as may be seen once that the lay mind can digest the fearsome Latin names that are given these commonest of fish. The habits of the herring have been fully investigated, their food properties demonstrated, and laws passed for their protection. For the next generation or so these fish will need about as much protection as the hated Dogfish, if the present apathy to turn the fish into hard cash continues.

Many attempts have been made to exploit the British Columbia herring. I know perfectly well that others longer at the game and far more competent than I am, have done their best to make use of what the sea has to offer us. That they have failed is due very largely to lack of capital, irregular packing, and to lack of co-operation and assistance from those who ought to be the very people to put the industry upon its feet. The British Columbia Government has its representatives all over the Empire, and the sole duty of these men is to exploit what the Province has to offer settlers. The various advertising campaigns have dealt at length upon the wonderful fruit to be grown, the mines to be found, the fine agricultural land abounding, and specially the marvelous fisheries around her coasts. The Canadian Pacific Railway has done the same thing with her land holdings in Alberta and Saskatchewan; but the C. P. R. has assisted the settlers to develop their land with cash loans. I may be saying things that might offend; but when I state that the fisheries of British Columbia have not been given the assistance they ought to have been given, I have the trade with me. Where the fault lies is not for me to show. But I think that commerce should be assisted in the same proportion that transcontinental railways are.

In the June issue of the Canadian Fisherman an article by Mr. John J. Cowie will bear me up to a very great extent. He has shown how the Scotch fisheries have been developed, and I hold that the same assistance should be afforded the whole sea-board of Canada. On the Atlantic coast we have the large herring in such quantities as may be found nowhere else in the world. Here in British Columbia we have its smaller brother; but its size will not prevent its getting a good market. I notice that the Canadian Fisherman has another mission besides that of Sanitation. It is calling for regular grading and care in packing of all pickled fish. Experts have been brought both to the Atlantic and also Pacific waters from Norway, Scotland and Ireland. These men have gone all over the two coasts and reported to their employers as may be seen in the Government blue books. These experts have shown the local fishermen how the fish ought to have been packed; but I think that we still have to hear of an expert who has either packed or superintended the packing of a car of pickled fish and gone to the market with this car, and placed it to advantage.

The Middle West of the United States of America is about one of the largest markets in the world for pickled fish, and especially herring. As I said previously, many attempts have been made to enter this market with British Columbia herring. The Atlantic fish are there now, but are not getting the prices that care in packing would get them. Foreign fish of inferior grades fetch better prices than Canadian herring. The reasons for this has already been dealt with by the CANADIAN FISHERMAN.

One mistake that has been made with the British Columbia herring is this. One cannot treat a fish from the warmer and less bracing waters of the Pacific in the same way that one would treat a fish from the Atlantic. Exactly the same sort of gibbing, placing in the barrels, grading, equal quantities of salt, may be done and given the two species. But they will not be equal in quality at their destination. No, what is wanted is to cure the fish so that both will be equal and stand together without any discrimination being possible even by the most particular buyers. And this is quite possible.

If this province is anxious to develop the resources that she has been given by nature, would not assistance towards this development be the very plan to hasten her growth? Those settlers who have come to the province after being shown what is to be had here, should be assisted to carry out the work they have come to do.

The price lists of packers and importers show the count of the goods they have to offer, and the exact weight per barrel. The date of the pack is also indicated in many cases. They are thus able to get the highest ruling prices for the different grades, knowing that there will be no complaints about having to repack and also to faulty packages. Their customers get exactly what they want and what they are buying. At present the marketing of Canadian herring is somewhat like a church bazaar "grab

bag." Pay your money and dip into the bag and get what you can. In other words, it is like the schoolboy's "blind swop."

Time and again it has been said that British Columbia has herring equal to any for their size to be caught in the world. Others have asserted that the herring are too small, too thin, and utterly unfit for packing. For this reason and also to lack of capital and assistance those who have attempted to do anything with them outside of the dry salting, have become discouraged. They have had practically no assistance, and have gone the way of all pioneers—left the profit and cream to be gathered by others. The assertion that the fish are too small has been justified by the quality of the fish that were packed. This impression would soon be changed if a few barrels of our present Point Greys were shown. That British Columbia has marketable herring is an absolute fact. Time will prove this statement. I was told by one of the largest importers of foreign herring in Chicago that if we can give him a fish counting 600 to 700 to the 200 pound barrel, have the barrels standard size, and the fish split or gibbed and packed in the same barrels and in just the same method as the Scotch, that he can handle many carloads. In fact he told me that the trade was looking for such an outside source. But he insisted that he be given what he wants, not what the packer wants to give him. I think that this last sentence bears a lot of looking into, and covers the packing of other fish than herring also.

From the end of June up to the Fall months, fish the above size may be had in abundance around the British Columbia waters. An average taken even this week in the middle of June, gives a count of 600-650 to the 200 pound barrel. Fish of this size may be had right of Point Grey, the entrance to English Bay now said to be part and parcel of Vancouver Harbour. The "Mosquito fleet" of this city can catch the fish and in a very short time deliver them at a wharf with trackage facilities. It is possible also to get men born and bred on the Scotch herring fishing stations right here in Vancouver. Even the Scotch lassies so necessary to the Scotch herring industry may be had here. The city of Vancouver is acknowledged to be a clearing house for every district of the United Kingdom. A very short search will produce the required skill.

It may be asked why, if I am so certain we have the fish, what the reason is that I do not interest capital or pack myself. To this question I would reply that a wrong start at the beginning of any undertaking is apt to ruin all chances of success. We need to have the co-operation of the Government whom we are under. That we are at last moving in the right direction is shown by the Pickled Fish Inspection Act, as ably explained by Mr. L. H. Martell in the June issue of the Canadian Fisherman. But, as the writer says, the Act does not go far enough. To make it of real use, every package containing pickled fish should be of uniform size; uniform wood and hoops; every fish be graded; fish packed according to grades, not all jumbled together; fish laid perpendicular (belly to back) in the barrels; and the fish of each row crossing the other to allow proper salting; the fish to be kept in pickle a standard time and well stirred before other treatment. Then, when the barrels are packed, they should be inspected by a duly authorized competent official. The inspection of the packages and contents of the packages should be compulsory, before the goods are offered for sale. Otherwise, as Mr. Martell shows, the Act will be of no avail and will not perform its mission which is to make Canadian Pickled Fish standard articles under Government strict inspection.

Seeing that British Columbia has the required herring, does it not seem a great loss to her and to the whole of Canada, that some means are not taken to make use of what is given her in such abundance? Why should these herring be only caught in such small quantities for local consumption fresh; for bait for the halibut fleet; and for dry salting to ship to China? The same uses may be made of the fish of certain districts where the size and the quality are not up to standard. The order in council from the Canada Gazette of June 6th of the present year has allowed for a very slight increase in the industry. Up to the passing of this order in council, the export of fresh herring was prohibited in any form. The new regulations provide that fresh and frozen herring may be exported in boxes of not more than two hundred pounds. This will help matters a little but not much, for the shipment of fresh and frozen herring to our only outlet, the United States, cannot equal by any means the impetus that would be given to the industry that is necessary for these herring to be pickled. There is nothing to stop us packing them in barrels at present except what I have outlined above.

The original act that has been modified as above, also states that canning is prohibited, also the converting of the fish into "guano, fertiliser or oil." At the present state of the markets governing these three commodities, this restriction seems a great and uncalled for handicap. We have herring in abundance for marketing fresh, frozen, pickled, dry salted, and also for rendering into guano, fertiliser and oil. In fact herring on certain parts of the coast are fit for nothing else but the latter three processes. Why then should this chance of a live industry be prohibited? Today Europe is looking for all the fish offal she can get. Instead of the offal and unmarketable fishes being turned into fertilisers, they are so treated to make "fishmeal," used for poultry foods, etc. Fishmeal will fetch a better price than the fertiliser, about $40.00 per ton f. o. b. the factory being offered today. If the average price f. o. b. steamer this past season for dry salted herring to China was $20.00 per ton and under, this new process looks to have more in it. Dry salted herring gives off no by-products like oil. But the processes for fertilisers and the fishmeals do. Today there are many inquiries for Herring Oil, and the answer has to be returned that the regulations forbid its manufacture. Meanwhile the fish are wasted, and no opportunities taken advantage of what the sea offers us.

The same Act regulates the size of the mesh to be used. This is as it should be. Those places on the coast where the herring is marketable for edible purposes, it is only proper that the size of the net and mesh be regulated by law. It will assist in the grading of the fish. But where the fish is of no use for food, then those who can find a market for this fish under other forms, should be permitted to catch them how they like—with a dredge if it will suit them; and in certain places a dredge might almost be used to advantage. We have plenty of fish, and fear of depletion is not very great.

I am not referring to the Province of British Columbia alone when I speak about the edible herring. The same standard of barrels and similar rules laid down for both coasts, cannot but give a tremendous

impetus to a very large industry at present in its infancy. The Atlantic can produce its choice large fish for those markets calling for the same, and we can supply the smaller fish. The Atlantic and the Pacific coasts of Canada can and ought to supply the whole of the demand of the American market. But let us crawl before we walk, and let us hope that soon interest will be aroused to take advantage of what nature has so bountifully bestowed upon us in Canada.

GENERAL NOTES.

Smoked Fish.

The Vancouver markets are somewhat large consumers of smoked fish, and this will account for the quantity of Finnan Haddies brought from the Atlantic Coast in proportion to the amount of fish sold here. The local kippers and bloaters are also good sellers, owing to the fact that the fish may be caught, smoked and sold in a very short time, thus avoiding the excessive salting required on fish from other points. Freshness is also an item that assists their sale.

A local concern, the London Fish Co., have been putting out what they call a Mild Cured Bloater. This is cured under the Yarmouth (England) process, and to date the packers have had such success that they are unable to keep up with their orders.

Shell Fish.

Whilst the Pacific is not abounding in the Lobster and large Oyster, still she can produce Clams, Shrimps, Prawns and Crabs that are equal to any in the world. The same local company, the London Fish Co., have a steamer about 200 miles north of Vancouver prospecting for Prawns. These are caught in about 90 fathoms of water, cooked on board and, after cooling, shipped in boxes per the local coastal boats thrice weekly to this market. When we say that Prawns up to 8 inches in length may be had, it can be easily seen what the market there is offering. In England it used to be the correct thing for the Bank Holiday tripper to the seaside to have at least one square meal of Shrimps or Prawns. Those who have learnt the delights of these little crustaceans can now appease their longings here. At all events, the experiment bids fair to be successful and inland dwellers may know that these shell fish are now to be obtained.

As I said before, we are lacking in Lobsters. But the few Crabs shown at the Dominion Fisheries Exhibit at Toronto in 1913 will prove that we have the Crabs all right. We all know that shell fish have to be given pure living quarters, and that there is nothing that will be affected so much by polluted waters as shell fish. The Canadian Pacific Railway has given the contract for its hotels and steamers to the packers of the Boundary Bay Crabs, Messrs. Fraser & Perrin. Some time ago there was a case of poisoning in the city through eating polluted Crabs. This cannot happen with the Boundary Bay article. The Crabs are in clean open water situated on the best part of Puget Sound, with no possibility of pollution. They are caught by traps similar to the Atlantic Lobster trap, and within a few hours of the market. To show the size of these Boundary Bay Crabs, I would state that those sold as small are 6¼ inches across the shell and the large up to 8 inches.

Mild Cured Salmon.

Prices seem to be keeping up and the supply less than the demand. There are very few packers operating in British Columbia waters, and those who are doing so are said to have sold their season's catch ahead. One or two cars have already left for the New York market and for Europe.

Fresh Salmon.

The Springs are just plentiful enough to allow the price being within reason and one that at this time of the year we in British Columbia feel we are satisfied to pay. A few Sockeyes are putting in an appearance, and the month of July will see them here again. But they will not appear as last year in such quantities that the local wholesalers were able to buy these six-pound fish from five to ten cents each, and enterprising peddlers were able to sell them off the carts on the streets for twenty cents a fish.

Canned Salmon.

Sockeyes (Talls)	$ 8.00
" (Flats)	8.60
" (Half Flats)	10.25
Cohoes (Talls)	4.50
" (Flats)	6.50
Pinks (Talls)	3.25
" (Flats)	3.25

Comparison with other months will show a little stiffening. From now on to the opening of prices the changes will be unnoticeable. July will see the actual packing of the Sockeye. In fact, a few are showing around the Fraser now, and on some of the Northern Canneries operations have already started.

Packers have sold up to about 90 per cent. of their estimated pack. They always have a pretty good idea what they will get, and so act accordingly. If anything, after orders at present contracted for, prices will stiffen again. Sockeye Salmon will be worth something this year.

Packers of other grades of fish have noticed a heavier and heavier demand for the Pink Salmon in the Old Country. This is due largely to the efforts of the packers and their agents and also to the Canadian Trade Commissioners in that country. It is thus easy to see why dwellers in Winnipeg have to pay more for their Salmon than Londoners. The freight rates are such that it would be almost impossible to register a "kick."

This week the Canners' Association met the representatives of the white fishermen of the Fraser River. Considerable interest seems to have been taken in the outcome. The idea seems to have been that the white fishermen should be given the preference by the canneries and also with regard to licenses. The fishermen were given every encouragement, as it is certainly to the interests of the country that its industries be in the hands of white people as far as possible. But in the course of discussion it was stated that the Japanese fishermen are found to be more energetic than the whites. It was also stated that the proportion of the Japanese fishermen to whom advances have been made, and these advances repaid, is far greater than the proportion of the white fishermen paying up in full. This has more truth than beauty in it. On the other hand, it looks as if John Chinaman in the cannery itself is to be replaced by the white man owing to the general adoption of the sanitary can. The cannerymen are agreed that this will be a benefit, especially as Chink's inveterate propensity for gambling often means that once that he has got his advance and lost it, he is off to another district looking for another advance.

We have noticed quite a quantity of the little Bluebacks around of late. These fish average about three to four pounds in weight. They are evidently a species to themselves, although many state that owing to the shape of their mouths they are the young Cohoes. Their flesh seems to upset this theory, as it is more like that of the Sockeye.

Herring.

That we have a marketable herring here is undoubted. But at present, through lack of proper packing and grading, the market is a very limited one. We are hoping, however, that the new Order-in-Council will allow further opportunities for marketing this herring harvest. To-day one can see on the local markets a nice fat fish averaging about 3 to the pound. Soon they will go almost double this. Strange to say, the months of July, August and September are the best for our Herring. I suppose because everybody else is busy on Salmon in those months, that this harvest is neglected. However, those who have the industry at heart will be rewarded sooner or later.

Halibut.

This year looks to be a banner one for the Halibut fishermen, judging from the size of the catches landed. The new boat put on by the Canadian Fish Co., Ltd., the "Knickerbocker," seems to be doing what was expected for her. There seems to be other markets for this fish than in the fresh and frozen state. What is wrong with smoking, pickling and canning? If it is lack of markets, these may be worked up just as the market for the cheaper grades of Salmon was sought and found.

Personal.

We have had a visit from the Hon. A. W. Piggott, Minister of Marine and Fisheries of Newfoundland. This gentleman was on the coast some time, and renewed his acquaintance with many former residents of that country. Being a man who has been through the mill from a boy on a half share up to skipper, Mr. Piggot knows what he is talking about, and is always trying to improve the lot of the fisherman at the same time as he is seeking to develop the fisheries of the country he serves.

Sea Lions.

A somewhat startling heading entitled "WANTED: SEA-LION SCALPS," appeared in a Vancouver paper lately. To many minds a Sea-lion comes under the same category as a Sea Serpent. But I assure the readers of the CANADIAN FISHERMAN that such things are to be found on the Pacific Coast in abundance. I do not mean Sea Serpents, as visions of these fearsome things depend upon the beverage consumed.

Just as the seal is playing havoc with the salmon, so are the sea-lions. The former are now outlawed with such a price on their heads as to make it worth the while of an inventive, enterprising man to devote his whole time to their capture. The Northern Canneries are so troubled with the depredations of the sea-lion as well as the seal, that they have assessed themselves at the rate of $1.50 per boat licensed to catch salmon. This will allow a sum of $1,050 to be devoted to paying a bonus for every sea-lion captured.

Some months ago there was a little stir caused on the Coast by the announcement that Sea-Lions were to be hunted and their blubber and skins utilized. It seems that this was an idea that some people were figuring upon, but it did not materialize. Like the local seal ("baybeater" in Newfoundland jargon), it is a most difficult matter to catch these animals. If they are shot in the water they immediately sink, and if chased on the land, they take to the water so quickly that it is impossible to get close enough to kill them.

GENERAL B. C. NOTES.

One of the busiest places in the city of Vancouver today is the factory of the American Can Co., Ltd. This factory has supplied a great many of the canneries with cans for the coming pack, and every year sees the patent or "crimp top" can more in favour. Many of the canneries have already the necessary plants for looking after this new style can, and several this year are installing them. There are many points that the "crimp top" can has in its favour. Here in British Columbia there seems to be more and more a feeling in favour of white labour. With the old style cans, Chinese were employed some months before making the cans. It is said that this year 75 per cent. less Chinese will be employed in the canned salmon industry than of late years. As white labour only is employed by the American Can Co., Ltd., those agitating for a "white" British Columbia are pleased thereat. But outside of this problem, which promises to cause the future generations endless trouble, the new sanitary can is really a boon. We believe that there are far less "blown" cans than formerly, and this alone will greatly help the industry.

The Halibut banks on the west coast of Vancouver Island have not been very productive of late. It is roughly two years since these banks were invaded by the Victoria fishermen, and the fact that the beds are now depleted points to action on the part of poachers. Northern waters are now sought by the halibut fishermen.

The Comox-Atlin representative at Ottawa has been busy on behalf of the B. C. fishermen. He has obtained several favours for them, including free distilate for fishing boats, improved telegraph arrangements, and one clearing and entering at the local customs office. This latter is a considerable saving in time over the old rule, that each trip the vessel enter and clear.

HALIBUT ARRIVALS IN B. C. MAY 25TH TO JUNE 25TH.

Prince Rupert.

	Lbs.
May 26th—C. G. Cox, Atlin Fisheries, Ltd ..	10,000
June 1st—Grier Starratt, Can. Fish & Cold Storage	38,000
June 2nd—Jas. Carruthers, Do.	90,000
June 2nd—Roosevelt, Skeena River Fisheries, Ltd.	20,000
June 3rd—Zorra, Atlin Fisheries, Ltd.	6,000
" 3rd—Chief Zibassa, Can. Fish & Cold Storage	50,000
" 3rd—Andrew Kelly, Do.	90,000
" 4th—C. G. Cox, Atlin Fisheries, Ltd.	32,000
" 10th—Borealis, Do.	12,000
" 6th—Chief Skugaid, Can. Fish & Cold Storage, Ltd.	60,000
" 6th—Grier Starratt, Do.	40,000
" 4th—Geo. E. Foster, Do.	70,000
" 12th—Grier Starratt, Do.	40,000

" 13th—Andrew Kelly, Do.	90,000
" 13th—Reef, Do.	20,000
" 13th—Zorra, Atlin Fisheries, Ltd.	17,000
" 15th—Chief Zibassa, Can. Fish & Cold Storage	75,000
" 15th—Chief Skugaid, Do.	70,000
" 16th—C. G. Cox, Atlin Fisheries, Ltd.	80,000
" 16th—Roosevelt, Skeena River Fisheries, Ltd.	27,000
" 19th—Jas. Carruthers, Can. Fish & Cold Storage	70,000
" 20th—Grier Starratt, Do.	30,000
" 23rd—G. E. Foster, Do.	70,000
" 23rd—Chief Skugaid, Do.	70,000
" 23rd—Zorra, Atlin Fisheries, Ltd.	18,000
Independent arrivals sold to Atlin Fisheries, Ltd.	160,000
	1,355,000

Vancouver.

	Lbs.
May 26th—Jessie, Crown Fish Co.	18,000
" 30th—Victoria, Do.	13,000
" 30th—Flamingo, Can. Fishing Co., Ltd.	130,000
June 2nd—Celestial Empire, Do.	115,000
" 4th—Pescawha, Do.	60,000
" 4th—Emma H., Do.	30,000
" 4th—Eva Marie, Do.	23,000
" 9th—Jessie, Crown Fish Co.	13,000
" 12th—Flamingo, Can. Fishing Co., Ltd.	70,000
" 14th—Kingfisher, New England Fish Co.	115,000
" 15th—Victoria, Crown Fish Co.	23,000
" 16th—Celestial Empire, Can. Fish Co., Ltd	125,000
" 17th—Pescawha, Do.	80,000
" 19th—Emma H., Do.	40,000
" 21st—Knickerbocker, New England Fish Co.	80,000
" 25th—Flamingo, Can. Fishing Co., Ltd.	100,000
	1,035,000

Steveston.

	Lbs.
May 29th—B. C. P., from stations B. C. Packers	50,000
June 2nd—Roman, Do.	40,000
" 5th—B. C. P., from stations Do.	40,000
" 12th—B. C. P., from stations Do.	30,000
" 19th—Roman, Do.	10,000
" 19th—B. C. P., from stations, Do.	70,000
	240,000

Totals for month May 25th to June 25th:—

	Lbs.
Vancouver	1,035,000
Prince Rupert—Production of Atlin Fisheries, Limited, all shipped to Can. Fish Co., Ltd., Vancouver	1,355,000
Steveston	240,000
Port Simpson	54,000
	2,684,000

E. N. Parker, of Owls Head, N. S., plans a lobster farm at Jeddore Harbour. The Bureau of Marine and Fisheries has granted permission to Mr. Parker to make experiments in lobster culture. A wire screen will keep the lobsters in the "farm" and will at the same time prevent the intrusion of any enemies.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by London Fish Co.)

Smoked Fish.

Finnan Haddies, Atlantic 15s and 30s	per lb.	.09
Fillets, Atlantic 15s	per lb.	.10
Bloaters, Atlantic 20s.	per lb.	06
Bloaters, Local	per lb.	.06
Kippers, Local	per lb.	.06
Salmon	per lb.	10-15
Halibut	per lb.	.11
Cod	per lb.	.09
Kippered Salmon	per lb.	.11
Kippered Halibut	per lb.	.12
Kippered Black Cod	per lb.	.12

Frozen Fish.

Salmon, Steelheads (dressed)	per lb.	.09
Salmon, Cohoes (dressed)	per lb.	.07
Salmon, Cohoes (round)	per lb.	.06
Salmon, Qualla (dressed)	per lb.	.05
Cod	per lb.	.05
Halibut, Chicken and Medium	per lb.	.05
Smelts, Local	per lb.	.05
Soles	per lb.	.05
Flounders	per lb.	.03
Perch	per lb.	.08
Herring	per lb.	.03
Black Cod, Alaskan	per lb.	.08
Mackerel, Eastern Shore	per lb.	.12
Shad Roe	per pair	.20
Whiting	per lb.	.03

Fresh Fish.

Salmon, Spring	per lb.	8-10
Salmon, Bluebacks	per lb.	06
Halibut	per lb.	4-05
Cod	per lb.	03-05
Smelts	per lb.	.05
Herring	per lb.	.03
Soles	per lb.	.05
Whiting	per lb.	.06
Skate	per lb.	.03
Perch	per lb.	.08
Rock Cod	per lb.	.05
Red Cod	per lb.	.03
Sea Bass	per lb.	.08
Black Cod, Alaskan	per lb.	.08
Shad, Columbia River	per lb.	.08
Sturgeon, Round	per lb.	.10
Sturgeon, Dressed	per lb.	.16

Pickled Fish.

Salmon (Sides), barrel 200-lb.	per lb.	.10
Salmon (Bellies)	per lb.	.12
Alaskan Black Cod	per lb.	.08
Eastern Dried Hake, per drum		8.50
Eastern Salt Cod (Whole fish)	per lb.	8-11
Pacific Whole Cod	per lb.	.07
Mackerel, Atlantic Specials, per 200-lb. barrel		26.00
Mackerel, Irish count, 340 to 20-lb barrel		19.00
Herring, Large Eastern	per half brl.	5.50
Herring, Holland mixers	per 10-lb. kit	1.00
Herring, Holland milkers	per lb.	.90
Herring, Local	per lb.	.07

Prepared Fish.

Boneless Cod, Acadia 2-lb. boxes	per lb.	.14
Do., Acadia Strips	per lb.	.13½
Do., Acadia Tablets	per lb.	14
Do., Bluenose bricks 1 and 2-lbs.	per lb.	.09½
Do., Pilot, do.	per lb.	.08
Do., Nova Scotia Turkey, 2-lb. bricks	per lb.	.07½
Do., Pacific	per lb.	.09

Shell Fish.

Deep Sea Crabs (Boundary Bay)	per doz.	1.00-1.20
Shrimps	per lb.	8-15
Prawns	per lb.	15-25
Clams	per lb.	.02
Clams, shelled	per gal.	1.25

Newfoundland Fisheries

St. John's, July 4.—The prospects for the season's fishery have brightened a bit since we last wrote, but, on the whole, the outlook is not anything too hopeful at this writing. To the West and South, especially from St. John's to Cape Race, there have been considerable fish taken the last few days, and there is also a good sign about Burin and neighborhood. To the Northward, the water remains cold and weather rough, and the takes to date, either by trap or hook-and-line, are very small indeed.

Some fish have been taken the last few days in various harbours in the Straits of Belle Isle, but the Labrador report is still to the effect that backward weather and presence of ice seriously interfere with fishery operations. However, the stationers and floaters have all managed to get down to the coast in spite of ice embargo, and are all ready to tackle the voyage as soon as opportunity offers. As far as we can learn, there are more men prosecuting the Labrador voyage this year than there was last year.

The bank fishery is looking very well at this writing, and bids fair to be, at least, an average one. Nearly all the schooners employed have made paying first trips, and some have arrived home after second trips well fished. There appears to be plenty of fish on the banks and, as a matter of fact, the most of the fish taken to date this year round the coast, have been taken at what may be called outside or headland ports. Warmer weather with fog and light winds are wanted to bring the bulk of fish home to the rocks all along the Newfoundland coast.

The coming season everything points to the highest price for cured Newfoundland codfish in the history of the Island. The economic factors in the situation tend to that end, and unless the very unexpected happens, "fish will be fish" during the coming fall. To summarize the situation, we have scarcely a cod's tail in our stores now, and we will have a month with clean stores before the ordinary date for new fish. This year new fish will not be ready for shipment till, at least, three weeks later than usual, and this will tend, of course, to run the price of the cured article up higher than otherwise would be the case.

Early and all as it is, a small parcel of thirty or forty quintals of new fish found its way into the city market during the week, the high values on the one hand and the keen desire of local merchants to buy, on the other, making an extra inducement for the sale at such an early period. We learn that this fish changed hands for seven dollars and a quarter, talqual. Small as this transaction was, it may be taken as a fair criterion of the price at which the regular season's goods will be valued, when they come next month, if the voyage procured in the meantime is not an extra large one.

One of the principal city fish exporters said to the "Trade Review" yesterday: "I believe that new fish will at least open at seven dollars per quintal, and with the present outlook for a small voyage owing to late beginning of fishing season, I would not be surprised to see it go to seven and a quarter dollars; but, of course, much will depend on the quantity of shore fish that will be landed between now and the middle of August. One thing our fishermen will have to keep in mind this season, and that is to make this fish well. When prices are high, our customers are narrowed to more fastidious people who, while willing to pay a steep figure for prime goods, will not buy at all if the goods are not right."

Another merchant, speaking on this subject yesterday, said: "The high fish rulings likely to maintain in the local market the coming season, are going to make all hands more cautious in buying the new voyage. This year we have determined at the start at any rate to buy no fish outside our own dealers, which will be as much as we think we can handle and realize on with any degree of safety. We will endeavour to ship as we buy, in the belief that there will be danger of realizing at a bare profit even, if we stock with a view of carrying over for any lengthened period. Prices are about at the top at present and under these circumstances there is always the danger of a flop to the other extreme."—St. John's (N. F.) Trade Review.

Telegraphic Address: NAVALMATH, Montreal, *Phone M. 5340*

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To The Wholesale Fish Trade

The attention of dealers who receive their fresh fish from Portland and other foreign sources is directed to the exceptional opportunities of obtaining their supply from the Baie des Chaleurs and the North Shore of the St. Lawrence, to their own advantage and that of their customers, and to the benefit of the fishermen of the Province of Quebec.

For all Information apply to--

THE MINISTER OF COLONIZATION,
MINES AND FISHERIES OF THE PROVINCE OF QUEBEC

Department of Marine and Fisheries

FISHERIES:

In addition to the full statistics of the Fisheries which are published yearly in the Annual Report, the Department issues monthly bulletins containing statistics of the sea fisheries and general information in regard thereto. Copies of these will be sent free to any applicant.

The value of the Fisheries of Canada is now about $34,000,000.00 annually.

The demand in the home markets for fresh and mildly cured fish, is expanding very rapidly. The Department pays one-third of the express charges on all shipments of such fish from the Atlantic Coast to points as far west as the eastern boundary of Manitoba, and from the Pacific Coast, as far east as this boundary. Over 1,000 tons more fish reached Montreal for use there and distribution to other points from the Atlantic Coast, under this arrangement last year than the year before. The growth has been equally satisfactory from the Pacific Coast to the Prairie Provinces.

Close Seasons for Fish in Force on December 1st, 1913

Kind of Fish	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.
Bass (Achigan)	.....	.....	.....	1 April to 15 June.
Maskinonge	.....	.....	.....	15 April to 15 June.
Ounaniche	.....	.....	.....	1 Oct. to 30 Nov.
Oysters	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.	b1 Jan. to 30 Sept.
Quahaugs	Oct. 1 to May 10 July 1 to Aug 31.	Oc.. 1 to May 10 and July 1 to Aug. 31.	Oct. 1 to May 10 and July 1 to Aug 31.	.....
Pickerel	.....	.....	.....	April 15 to May 15.
Salmon (netting)	Aug 15 to March 1.	Aug. 15 to March 1.	.....	Aug. 1 to April 30.
Salmon (angling)	eAug. 16 to Jan. 31.	Sept 16 to March 31. f	.....	Sept. 16 to April 30.
Smelts	fApril 1 to July 1.	fMarch 1 to June 30.	fApril 1 to June 30.	.....
Sturgeon	.....	June 1 to July 1.	.....	June 1 to July 1.
Speckled Trout	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to March 31.	Oct. 1 to April 30
Salmon Trout	.....	.....	.....	Oct. 15 to Dec. 1. f
Whitefish	.....	.....	.....	.....

Kind of Fish:	Ontario.	Manitoba.	Saskatchewan.	Alberta & British Columbia.
Bass (Achigan)	a15 April to 15 June.	.....	.....	.....
Maskinonge	15 April to 15 June. f	.....	.....	.....
Ounaniche	.....	.....	.....	.....
Oysters	.....	.....	.....	.....
Quahaugs	.....	.....	.....	.....
Pickerel	cApril 15 to May 15.	April 15 to June 20.	dApril 1 to May 15.	dApril 1 to May 15.
Salmon (netting)	.....	.....	.....	.....
Salmon (angling)	.....	.....	.....	.....
Smelts	.....	.....	.....	See regulations.
Sturgeon	.....	gMay 15 to June 15.	gMay 15 to June 15.	gMay 15 to June 15.
Speckled Trout	Sept. 15 to April 30.	.....	.....	.....
Salmon Trout	hNov. 1 to Nov. 30.	.....	.....	.....
Whitefish	hNov. 1 to Nov. 30.	Sept. 15 to Nov. 19.	iSept. 15 to Dec. 15.	iSept 15 to Dec. 15.

a—Except in Lake Erie west of Pt. Pelee and around Pelee Island, where close season is May 25 to July 15.
b—Except on leased areas, where close season is from 1 July to 31 Aug.
c—No close season in St. Clair River and off Lambton County.
d—Except in waters north of or intersected by 54th parallel north lat. between eastern boundary of Saskatchewan, and 109th meridian and in waters intersected by or north of 55th parallel n. lat. west of this meridian to western boundary of Alberta, where there is no close season.
e—Except in Cape Breton Island, where close season is from Sept. 27 to May 31.
f—Bag-net fishing season Dec. 1 to Feb. 15; gill-net fishing season Oct. 15 to Feb. 15. Licenses required for bag-nets or gill-nets.
g—Sturgeon fishing prohibited until Jan. 1, 1916.
h—No close season in Lake Erie.
i—Except in waters specified in (d) where close season is from 1 Oct. to Nov. 30.
For British Columbia See Regulations.

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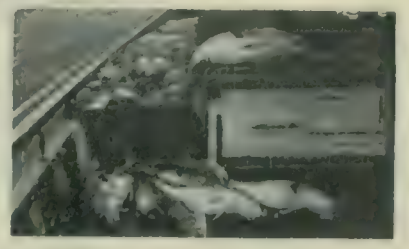

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

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Published on the fifth day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

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SUBSCRIPTION: Canada, Great Britain and United States, $1.00; Elsewhere, $1.50, payable in advance.

Vol. I. MONTREAL, AUGUST, 1914 No. 8

Fisheries Exhibit, Canadian National Exhibition

The present number of the CANADIAN FISHERMAN has been produced as a special issue in keeping with Dominion Government's Fisheries Exhibit at the Canadian National Exhibition, Toronto. The idea of having an exhibit devoted to Canada's vast fisheries was started last year by the Department of Marine and Fisheries and the good work commenced then has encouraged the officials of the Department to organize a still better show for 1914.

The fish business of Canada, like all other industries, needs advertising—especially in the inland Provinces, where there is a large population who know very little about the good qualities of fish as a food. The City of Toronto is the most centrally located place in the Dominion for exhibition purposes and the National Exhibition held there every year from August 29 to September 12, affords one of the best mediums to show the public just what Canada can do, and is doing, in the development of the fisheries natural to our territorial and adjacent waters.

The Fisheries Exhibit occupies a whole wing in the Dominion Government Building, and several of the largest fish concerns in Canada have erected handsome stalls in which they display the various kinds of fish foods handled by them. The many thousands of people who visit the Exhibit daily can see samples of edible fish put up in a hundred different forms. The waters of the Atlantic are well represented by fresh and frozen specimens of cod, halibut, haddock, pollock, hake, cusk, mackerel, herring, sword-fish, gaspereau, shad, salmon, etc., in addition to prepared fish—salted, smoked, pickled, boned, shredded filleted and dried. The Great Lakes and Inland waters are showing a large and varied number of fine fish in pickerel sturgeon, bass, whitefish, dore, trout, goldeyes, lake herring, perch, pike, catfish, carp, tullibee, and others, while the Pacific Coast exhibits the lordly salmon, halibut, cod, herring and fish native to the western seas.

The packing end of the fish business is well represented, and samples of the various lines of canned salmon, halibut, finnan haddie, sardines, herrings, lobsters, clams, crabs and oysters are also on view. The by-product in fish glues, fertilizers and oils have their place in the exhibit and afford an idea of the magnitude of the industry.

The benefit of such an exhibition to the fishing industry and the concerns engaged in the fishing business is undoubtedly great. The public are thus enabled to see just what a large variety of splendid foodstuffs they can procure in fish, and with the exorbitant prices charged for meat at the present time, they have it put before them that fish is cheaper, and at the same time, a palatable and more economical substitute.

The European War and the Canadian Fisheries

The deplorable conflict which is convulsing Europe at the present time has already had its effect upon several industries. Factories have been shut down, many manufacturing plants have closed or laid off half their staff, and general stagnation prevails in many particular enterprises.

As far as the Fisheries are concerned, we do not think that the war will hinder the industry in Canada.

In fact we are of the opinion that it will do something to assist the business in several ways. In the first place it has eliminated a certain amount of competition from Europe as the mobilization of the various naval forces of Great Britain, France, Germany, Norway and Sweden means that a vast number of fishermen who are naval reservists have had to join ships of war. The North Sea—the great fishing ground of the European fleets—is, at present, the arena of the battle fleets and therefore not likely to be fished to any great extent while the issue hangs in the balance. Also, the fish that is being brought in will not be exported, but will be used to counteract the food scarcity of Europe.

The cruisers of the Mother Country have kept the Atlantic shores of Canada clear of German war vessels and there is absolutely nothing to prevent Canadian fishermen from prosecuting their business as usual. Even if there were a number of German warships prowling around the fishing banks it is safe to say that they would never bother fishing vessels. Fishing craft are of little value as prizes—in fact the fishing schooner employed Bank fishing out of Canadian ports is of absolutely no prize value to an enemy. On the other hand, if our fleet were steam trawlers there would be some little value to them, as they could be rifled of their coal.

With nothing to fear from capture or destruction—modern nations do not war on fishermen—our trawlers, handliners, and seiners are free to pursue their business without much danger of interruption on both the Pacific and Atlantic. The Great Lakes, being purely enclosed waters without a possible enemy upon them, are out of the question.

With meat prices soaring sky-high, a splendid market is opening for fish of all kinds. The people of Canada will realize the economical value of fish as a food very shortly and there is bound to be a great demand provided there is no increase in the price—at least in the proportion in which other lines have gone up. Salt and pickled fish will have a rise, as the salt used, being imported from Italy and Great Britain, has already risen in price, but fresh, smoked and canned fish will remain the same as heretofore. In conversation with CANADIAN FISHERMAN representatives, several prominent fish merchants stated their opinion that fish prices would not rise. "As long as we have the ready money to pay the fishermen and as long as the Banks will have enough faith in the fish business to back us up we will not raise the prices of fresh, smoked and canned fish to the consumer. The export business in salt fish will be different. We have to pay more for salt and as we have to depend on Europe, the West Indies and Brazil for our market we have several difficulties to contend with in the way of insuring our cargoes and getting our money."

It is an ill wind which blows nobody good. With the competition in European sardines, salt mackeral, herring and other lines practically stopped the Canadian fishermen and dealers have the whole fish business in their own hands. We can get the fish right in our own waters—plenty of them—and the public will not be long realising that they will have to eat more fish to live at all in these days of rapidly advancing food prices.

Once the demand is started, there is no reason to suppose that it will fall off when everything settles down again. We have the goods. We are able to supply them at the right prices. We know their value as food and it is not necessary for us to lie or exaggerate about them, but it is up to all the business men in the fishing industry to advertise FISH as a cheap substitute for MEAT in every way possible. Because we are engaged in a deadly war is no reason for crawling into a hole and remaining quiet until it has blown over. Now is the time to come out and make business, and if the trade will only get enthusiastic over the prospect and all do their share in booming fish, they'll never regret it.

Beef versus Fish

A prominent cattle raiser in the United States stated the other day that beef was a luxury, and we do not think that any person will deny him. Not only beef, but pork, mutton, lamb and fowl may be classed under the same head. The man who asks for a steak nowadays is eating dollar bills—almost every mouthful is worth ten cents. If we paid high for meat before the war it is a sure bet that we'll pay a great deal more now.

Of course, there are some people who will insist on having beef at any price, and could not be induced to change their diet even when other foods, cheaper and just as nutritious, are placed before them. It is all very well for the wealthy man to have what he wants, but it is a great mistake for the working man to indulge his appetite at the expense of his pocket. The old fallacy that a man could not do a hard day's work without he had meat for his meals is a myth—but it is a myth which dies hard.

Fish is the only real substitute for meat. Fish is plentiful and cheap. Fish can be cooked in a hundred different ways and the varieties of good fish are numerous. A man can do just as hard a day's work on fish as he can on meat—in fact we are of the opinion, and it has been backed by medical men, that fish is a far more healthier diet and much more sustaining than meat.

The Japanese soldiers live largely on dried fish and it would be hard to find tougher men. In the Russo-Japanese War they showed wonderful hardihood and endurance. The hardy fishermen of the Northern countries of Scotland, Iceland, Norway and Sweden live largely on fish and it would be hard to beat them for strength and the ability to stand long hours of downright hard work. Take any nation of fish eaters and you will find them sturdy and able. Even a West In-

dia nigger will work all day in the hot sun on a couple of salt herring or a piece of dried codfish.

Fish has got beef down and out on all points. It is cheaper and every bit as sustaining, and the sooner the public awakes to this fact, the better for all concerned.

Warning to Fishermen

Owing to the state of war which exists at present ocean steamers are now making the passage from port to port with lights out at night and steaming full speed through fogs and mists without giving sound signals. In some cases, steamers are only showing the two side lights similar to sailing vessels.

The editor, being fully aware of the danger to fishing vessels caused by these actions, would warn skippers of fishing craft operating on the off-shore grounds to keep a good look-out at all times, set double watches in thick weather, and see that the side lights are burning brightly. Keep the fog-horn going in fogs and mists and have torches and flares handy for instant showing in event of danger from collision.

Vigilance should be maintained in all waters whether on the regular steamer lanes or not, as vessels are departing from the usual tracks to avoid possible capture from supposed enemy's warships.

As the CANADIAN FISHERMAN reaches a large number of fishing skippers we consider the publication of this warning necessary to the interests of the industry.

FISHERIES STATISTICS, JUNE, 1914.

The total value of salt water fish landed during the month of June, 1914, to the fishermen was $2,375,888, or an increase of $297.176 over the value for the same month last year. The weather conditions were very unfavorable on the Atlantic coast for fishing, otherwise the catch would have been much larger.

Among those kinds of fish showing increased catches are lobsters, cod, haddock, herring, mackerel, shad, alewives and sardines.

The close season for lobsters came into force in the counties of Nova Scotia from Digby to Halifax at the end of May. Lobster fishing was carried on, however, in the Bay of Fundy during part of June and to the eastward of Halifax and along the Gulf shore throughout the month. Since the opening of the lobster season in November there have been 132,101 cases canned, and 78,225 cwts. shipped in shell, compared with 128,402 cases packed and 92,547 cwts. shipped in shell during the corresponding period last year.

FISHERIES OF ENGLAND AND WALES.

The quantity of fish landed during June was 1,052,040 cwts., valued at £686,847, compared with 948,629 cwts. and £658.800 in June, 1913—increases of 103,411 cwts. and £28,047. The chief increase was in the quantity of cod landed, that in June 1914 being 354,753 cwts. and June, 1913, 257,021 cwts.

OPTIMISM

Optimism means looking on the bright side of things. The War in Europe, even though our country is vitally concerned, does not mean ruin to our industries. We are not going to be licked. We're going to lick the Other Fellow. That's Common Sense Optimism.

Circumstances are opening up big chances in the Fish Business of Canada. When people are cutting down living expenses they'll have to eat less Meat and more Fish.

The Fisherman will find just as many fish in the sea or lake as ever there were. The fish merchant will find a good market developing and waiting to be developed if he cares to make use of Opportunity.

Now is the time to Get Busy and spread the gospel of fish. Spend your money in getting after new business. Flood the retail stores with fish. Advertise fish foods in the newspapers and other mediums. The returns will come.

There is no call for the business men in the Fish Business to close down, and hide their money away in a sock until the row is over. Now is the time to use your capital, but use it carefully and judiciously.

Victory comes to him who has courage.

THE DEEP SEA FISHERS.

The good ship "Sofa" heaves and dips amid the smaller sails
And here, with string and crooked pin, we sit and fish for whales.
All day we fish with might and main the Parlour Carpet Sea,
For oh, the larder's empty, and we must get food for tea!

What though about our slender craft the billows beat and roar?
What though great, greedy, green-eyed sharks infest the parlour floor?
Our relatives depend on us, and tea-time's drawing nigh.
If food they lacked, we could not bear to see them sit and cry.

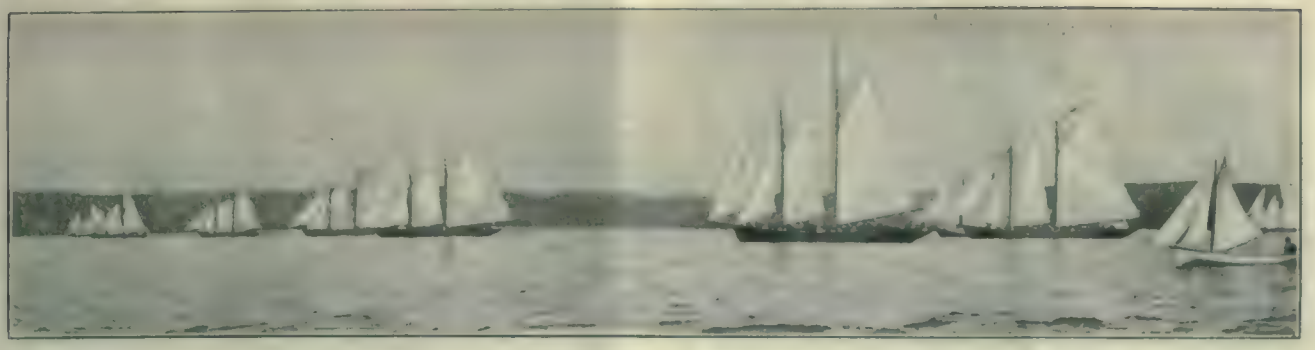
Then, hungry uncles, starving aunts, and famished parents dear,
Who wait anxiously, on shore, we'll feed you, never fear.
What ho, a bite—a whale at last! Our tiny ship careens!
The household's saved! There's food for all—a tin of fine sardines!

MELVILLE CHATER.

WITH THE DEEP SEA FISHERMEN

Drawn by F. William Wallace

The First of a Breeze—Picking Up the Dories.



DIGBY AS A FISHING PORT

By ROY M. WYNACHT.

Probably the most important factor in Digby's present importance as a fishing centre is its position. It is situated on the West side of the famous Annapolis Basin, which, in turn, is situated on the Nova Scotia shore of the Bay of Fundy almost directly opposite, and forty-eight miles from the city of St. John, N.B. The Basin forms a splendid harbor, easy of access, open all the year, and of ample room to accommodate an almost unlimited number of vessels. Hence, Digby is one of the favorite ports of the fishermen. Besides the natural facilities for land fish, the port has direct connection with the Upper Provinces by the C.P.R., so that it is possible to land fish in Montreal just eighteen hours after they are landed at the docks in Digby. It is quite frequently the case, in preparing rush shipments of fresh fish, to have them thrown out of the boats between the hours of dawn and noon, almost flapping; packed and on board the steamship by 1.30; in St. John by 4.45, and in Montreal next morning at eight o'clock. This makes one feel like ordering fresh fish for dinner!

The fish are caught by a growing fleet of (at present) ten sailing vessels averaging about ninety tons each, which fish off shore; several smaller sailing vessels of about twenty-five tons, fitted with marine engines, which are used in gathering the fares of the fishermen of out-lying places along the shores; and a fleet of small, open, motor boats of the finest class built. The boats and smaller vessels fish along the shores of the Bay of Fundy, often but a short distance from Digby Gap and frequently right in the Basin. The larger vessels do their summer fishing around the mouth of the Bay of Fundy on the grounds known as the German Banks or the Seal Island grounds, where they catch principally hake, cusk, cod and haddock. About the first of February they change their grounds, and follow the fish further south to Brown's, La Have and Western Banks, where the catch is principally haddock; but the great bulk of the haddock caught during the winter months comes from Brown's Bank, which is situated about fifty miles south of Cape Sable, N.S. The first trip of haddock caught on Brown's and landed at Digby was brought in by the schooner "Quickstep," Capt. Arthur Casey, in February, 1901; and since that time Brown's Bank has contributed an immense quantity of smoked, fresh and salted haddock to Canadian markets—via Digby. Each of these offshore trips occupies a period usually of from five to fifteen days, according to fishing conditions, and they catch during that time from sixty thousand to one hundred and twenty thousand pounds of fish. Besides haddock the fare usually consists of cod, hake, pollock, cusk, halibut, etc., which are of course marketed along with the haddock.

ONE OF DIGBY'S CRACK FISHING SCHOONERS.

Digby has become famous as a finnan haddie town. The industry was introduced in Canada by a Scotchman named John Austin, who started manufacturing haddies in Digby some fifty years ago. And since then the business has steadily grown, and Digby is still the prime finnan haddie manufacturing town in the Maritime Provinces.

A large quantity of haddock and cod are shipped in the fresh state to the Upper Provinces; but with improved transportation facilities, this branch of the business would materially increase. Some of the necessary improvements for this desired increase are: More careful handling of express packages, which are sometimes broken in transit; and prompt dispatch of both express and freight shipments of fresh fish, which soon deteriorates if neglected while en route, especially if left lying in some heated warehouse or stowed too close to steam pipes on steamers and express cars.

The name of Digby has also become prominent in connection with a brand of smoked herring known as Digby Chicks. Immense quantities of these herring were shipped from Digby some twenty-five years ago, but during the last few years this industry has gradually dwindled down to practically nil. The cause of this is probably due to the rapid growth of the finnan haddie business, which has detracted the attention from the smoked herring business; and what herring are taken at present are used for bait by the haddockers.

The clam industry in Digby should not be overlooked, for there is an average annual production of about ten thousand barrels. These clams are the soft shell variety, of excellent quality and find a ready market in the United States. The Canadian markets do not seem to appreciate them except in a shocked state, and then the quantity used is not great. In the rush seasons upwards of a hundred men are constantly employed, and two or three hundred barrels are shipped daily.

In the spring and summer large quantities of winkles and mussels leave Digby. During the months of July and August tons of Dulse is gathered and shipped. And in the lobster season thousands of barrels of lobsters are exported.

The fish firms operating plants at Digby are: Maritime Fish Corporation Limited; Joseph E. Snow; D. Sproule and Co.; The Nova Scotia Fish Co., Limited; and G. E. Wightman (clams). Some four years ago the firms of Short and Ellis and Howard Anderson amalgamated, forming the Digby branch of the Maritime Fish Corporation; but the heads of the old firms are still active, directing the course of the new concern. To these firms is due in a large measure Digby's success as a fishing port in the past, the present substantial growth and the bright prospects of future development.

ONE OF DIGBY'S LARGE FISH PLANTS.

THE NORTHERN WATERS

By ERNEST McGAFFEY, Secretary, Bureau of Provincial Information, Victoria, B. C.

"In the North Sea lived a whale,
Big in bone and large in tail."

Picture to yourself miles of coast line, fringed for the most part by mountain ranges that are timbered almost to their summits. A line extending 7,000 miles along British Columbia in its general course, but making up, with its numerous irregular indentations, many thousands of miles in addition.

All this coast line and the adjacent waters of the Pacific in a "fish-bearing area." Whales, herring, skil, salmon, halibut, bass, flounders, whiting, soles, sardines, anchovies, smelt, Oolachans, and pilchards, are found in the great "fin belt."

Clams, crabs, shrimps, cockles, prawns and mussles add to the variety of sea-food available.

The halibut are the true "sea sheep," congregating in the deep water plains in immense bands, or "banks" as they are termed. They run from 10 to 200 pounds in weight and occasionally even larger, and their trusting dispositions renders them a comparatively easy prey to the wiles of man.

Just now a large proportion of the capital invested in Northern fishing runs to whales, salmon, and halibut, and of all this fishing none is more tinctured with the flavor of romance than the halibut fishing. In all the various angles and lines (no puns intended) of British Columbia fishing, the element of danger, while not entirely absent, is not so frequent nor so imminent as in Atlantic Coast fishing.

Much of it is done in the inside passages or semi-sheltered zones, islanded off from the main ocean, and as a result the heavy seas and swells of the ocean are broken or smoothed to a great extent. Then, too, there are no icebergs to cope with, and there are any number of coves and inlets to slip into when the storms come in.

From the decks of the passenger steamers sailing northward, the halibut boats present picturesque effect. Each boat holds two men, and when one of the "big fellows" is hooked, there is plenty of excitement. The method is to throw out the bait—herring—and get the halibut properly enthusiastic as to the free lunch they are enjoying. Then the hooks are dropped, baited with herring, and the greedy halibut are hauled in willy-nilly.

Of late years the trawlers are beginning to cast their lines from the ship's decks, dispensing with the dories, and this enables them to fish in nearly all weather, fair or foul.

The changing panorama of sea, cloud and sky is filled with the sense of light, color and motion as the work goes on. The distant fringe of dark-green forests curves about the onloooking shores, and the smoke of a passing steamer trails vaguely across the scene. Here and there the wild-fowl rise and wheel away to new resting-places; and all day long the sea basks, heaves and shimmers in the sunlight,

"With shining scales and undulating folds
A mighty dragon coiled about the world."

In the cold storage plants, the headless halibut, chilled by a temperature of six below zero, and glistening in icy coats of mail, are corded away by the thousands. Here you may see the commercialized article from the "chicken" halibut of from seven to fifteen pounds, to the Brobdignag of the deeps, tipping the scales at 200 pounds.

It is a strange and weird descent into these Polaric vaults from the warm sunlight outside. Heavy doors open and close, hoar-frost glitters brightly on the concrete walls, and the chill of mid-winter assails you from all sides. Tons of bait—frozen herrings—ready for use, and tons upon tons of congealed and ice-clad halibut, lie on the racks awaiting shipment.

On the day we visited the Canadian Fish and Cold Storage plant at Prince Rupert, 30,000 pounds of superb spring salmon had just come in from the Skeena River, and were being mild-cured for the German market, in that branch of the Company's works.

Cod-fishing, including not only the true cod, but the red and black skil and the tom-cod, has hardly been touched in Northern waters. That there is a big field

Steam Dory Halibutter "Andrew Kelly" at Prince Rupert.

for this kind of fishing is not to be doubted. Once railway connection is established with Eastern Canada and the United States, and this is now a mere matter of weeks—Prince Rupert and the North will be a Mecca for investors in the fishing traffic.

The smoke of the salmon canneries drifts skyward in bluish haze. The spout of the hump-back whale spirits upward off Kyuquot and Sechart. The silvery shoals of herring tumble in the meshes of the seines at Nanaimo and off Kaien Island. The salmon leap from the river-trails of the Skeena and the Fraser, and all along the northerly and north-westerly coasts the halibut feed on the lower pelagic levels.

Sea, sky and shore. The magic of ocean furrows and the rocking of the dories on oily swells shouldering in from seaward. Gulls wings, winnowing the salt air, and a myriad fascination in wide and watery fields dotted with foam and strewn with slippery seaweed.

Here is where commerce and romance meet, where the shift from the picturesque to the prosaic is accomplished with a turn of the wrist. Scenes for a painter and figures for a capitalist. The never-ending and always-changing warp and woof of the waters of the North.

CANADIAN LOBSTER FISHERY IN DANGER

By COLIN McKAY.

A rather grave and peculiar problem has arisen in connection with the lobster fisheries. American smacks are able to fish for lobsters just outside the three-mile limit at a time when our own fishermen are forbidden by the regulations to catch lobsters. As yet the number of American smacks which have taken advantage of this privilege has been small, but there will be more this summer than last, and the practice is likely to be extended. At the present time many Nova Scotia fishermen catch lobsters during the open season on grounds lying outside the three-mile limit, and this invasion of American smacks defeats the purpose of the close season, so far as the outside grounds are concerned.

It is not very pleasant for our fishermen to have to stand by and see the Americans taking lobsters off the coast while they are forbidden to take them; fishing over during the summer the grounds upon which they have to rely for their catches in winter. Moreover, it is claimed that fishing for lobsters in the summer involves the destruction of many "berried" lobsters, and has a serious effect upon the supply of lobsters.

So far these American smacks have confined their operations to the lobster grounds off Cape Sable and the islands along the coast of Yarmouth county, N.S. Ward Fisher, inspector of fisheries for Western Nova Scotia, told me the other day that he had information that five smacks from Maine would operate in his district this summer, and J. F. Calder, fisheries inspector for St. John and Charlotte counties, said he had heard that one Maine smack would fish for lobsters this summer off the coast of New Brunswick. These smacks are able to take out a trader's license, and come down to our shores and buy up lobster traps; then, returning to their home port, they take out a fishing license, and again sail for our coast, and set their traps outside our littoral waters. Last year some of these smacks operating in the vicinity of Seal Island ran into port nearly every night, practically making our coast a base for their operations. They run their catches to Maine, where the regulations for different districts vary greatly and where lobsters can be marketed practically at any time.

A feature of the situation which is of interest is the fact that it is possible for the American smacks to employ our own fishermen to assist them in taking lobsters outside the three-mile limit during our close season. Our Government cannot interfere with lobster pots set outside the three-mile limit; it can only prevent our fishermen landing lobsters in the close season. But if the American smacks are waiting to buy lobsters outside the three-mile limit, they don't have to land their catches. True, existing regulations prohibit our fishermen from taking lobster traps or gear from the shore during the close season for the purpose of fishing for lobsters; but there is nothing to prohibit the fishermen whose traps are outside the three-mile limit leaving them there after the close of the open season, or to prohibit the fishermen whose traps are inside the three-mile limit moving them outside the limit as soon as the open season closes.

The problem of preventing American smacks taking lobsters outside the three-mile limit is giving the fisheries officers some concern, for if this invasion should continue and be extended to all the lobster fishing districts it would undoubtedly deplete this valuable fishery. One sugegstion made is that Canada should refuse to allow these smacks to come into our ports and purchase more than sufficient water or supplies to take them home. But such a regulation would be difficult to interpret or enforce, and the American smacks could evade its purpose by carrying larger quantities of food and water.

Another suggestion is that the government should abandon the policy of trying to conserve the lobster supply by enforcing a close season, and raise the size limit. Such a programme would doubtless be opposed by the canners, who, in many districts have to depend on small lobsters to keep their factories in operation.

Possibly the Canadian Government might effect some arrangement with the American government to induce the latter to consent to the prohibition of this practice on the part of American fishermen, but it is rather unlikely. Certainly before agreeing to such an arrangement the United States would be likely to exact some concession in return.

As the most valuable lobster fisheries in the world lie off the Canadian Coast, the problem which now presents itself is a very important one. Of late years the fishermen of our eastern sea board, particularly those of the western counties of Nova Scotia, have found the lobster industry a considerable source of gain, for the succulent crustaeaus have increased in price—so much so that only the well-to-do away from the sea coast, are able to include this delicacy in their bill of fare. Not so many years ago the lobster fishermen counted themselves lucky if they got a cent or two for big lobsters, but now those in a positoin to ship green lobsters to the market get anywhere from 15 to 30 cents a-piece for the larger sizes.

JAMAICA FISH MARKET.

(Special to Canadian Fisherman.)

Since the last report, the market during the month of July has held very firm at fairly good prices, all old stocks have been cleared up, and only limited quantities arriving. The present quotations from abroad are:—Donkeys Newfoundland fish $31.00, f.o.b. Newfoundland; barrels do. herrings, $4.00 f.o.b., Newfoundland.

From Halifax the prices remain exactly the same as they were last month, except quotations on large herrings at $5.00 f.o.b., and medium herrings at $4.00.

Sales have been made on our market at fairly good prices, due to the very limited supplies on hand.

HOW THE GERMANS SHIPPED LOBSTERS.

Previous to the outbreak of war a German company established themselves at Grimsby—a port on the northeast coast of England, and bought lobsters from all parts of the British isles. During the month of June they received over 10,000 lobsters from various parts of the country. These lobsters were sent to Grimsby by rail. On arrival there, they were placed in large tanks of salt water and the water slowly charged with oxygen. After they had been some hours in this water, they were shipped direct to Hamburg, where they were again put into salt water charged with oxygen before being placed upon the market.

THE HALIBUT FISHERIES OF THE CANADIAN PACIFIC

By A. E. HOWARD.

Completion of the National Transcontinental to the Pacific seaboard emphasizes the fact that where Alaska leaves off British Columbia begins. Heretofore this geographical feature has been impressed on our neighbors largely by confiscation of piratical fishing craft. It must be admitted, however, that a policy of negation does not redound particularly to the credit of a great maritime nation. A neglected orchard invites pillage.

It is perfectly true, of course, that in the broader sense of the term, there are no deep sea fisheries at all on the Pacific as yet. The codfish banks around the Unimak that are being fished out of Puget Soumd ports and San Francisco, do not fill the classification. The oncorhynchus species of salmon, while existent on both shores of the Pacific, more prolific indeed on the Siberian Coast than in Alaska, cannot be taken on the high seas. So far as our investigations go at present, it would seem that in the main halibut form the nucleus around which the fishing industry in the Atlantic sense must necessarily grow. Even the herring fishery is so prolific in resource that it may be said halibut bait can be dug in the back yard of Vancouver. But while halibut is a deep water fish and undoubtedly can be taken, and has been taken, by steam trawlers well out on the Pacific Ocean, the discovered banks and feeding grounds are around the "tap roots" of the coast of Northern British Columbia. The habitat of these fish is also spotted all through south-east Alaskan waters up to Yakutat, and beyond, but I am firmly convinced that the more extensive breeding grounds (the fish is non-migratory) are as above stated.

Experiments made in provincial waters disclose the fact that where the depth of water is too great to work hand-line tub trawls, it is useless to look for these fish in schools of any considerable proportions. My opinion as to the true home of Pacific Coast halibut is further strengthened by observations made as to salinity and density of water, average temperatures, food organisms and more especially nature of bottoms which halibut frequent.

Now apart from all political considerations, and be the fishing grounds near or far, it is essential that a base of operations exist somewhere; more especially where ice and refrigeration are the methods used for preserving the fish. A cold-storage plan with a more or less indefinite relation to independent fishing units, which neither catches, processes nor manufactures fish food and by-products, is merely a buying and forwarding agent. It certainly should be heavily taxed as a non-producer. On the other hand encouragement should be given the manufacturer in this, as in every other, industry. Some years ago a Boston fraternity of T wharf fish merchants, located the New England Fish Company in the city of Vancouver. These American gentlemen have been highly successful in the catching and marketing of halibut. It is true that they do not process or manufacture the fish. Nevertheless they have expended large sums in outfitting halibut vessels and in wharfage and shipping activities consequent on the rapid growth of their opertations. Strenuous objection has been raised as to the "bonding" privileges accorded them for shipping halibut to the Eastern States. Despite, however, the fact that the tariff bars are now down on the raw product, it does not seem that Canadian fish producers have been attracted to the opportunity claimed to be denied them heretofore. The fact is there is altogether too much stock flotation connected with fish corporations in this province, too much graft in the jobbing of fishing "areas" to political heelers, too much milking of genuine producers in other lines of the fish business. Certainly to a large extent halibut as well as salmon are a great "natural resource" of British Columbia. We need to conserve the fish, and there is little doubt from the fishing returns that some effort will have to be put forward in the line of artificially propagating halibut in the near future. Spasmodic "spurts" in the yield do not offset the average decline in both quantity and quality. It has been demonstrated quite recently that in the culture of salmon ova the nearer-to-nature movement has fully justified itself. I cannot see why similar methods should not be successful with halibut. We need also to conserve the fish for Canada, but this point, as I have stated, is better taken by an extension of Canadian fishing enterprises than by adding to the flotilla of gunboats. One research vessel on the Canadian Pacific, so far as the commercial fisheries are concerned, would be infinitely more worth while than a dozen protective cruisers. The fish lends itself well to processing. It can be salted and smoked at pleasure. While not ranking high in food value, it is sound, healthy provender, nutritious and palatable. Possibly considerable success might attend the can "kippering" of this fish in Scotch fashion. Fried in batter and packed in oval tins with tomato dressing, the product would make a forcible appeal to consumers. Here again, manufacture is strongly indicated at the producing centre. There is a very grave danger in handling a glut of fish through refrigerating warehouses. It is absolutely wrong to stock any fish in cold storage after having become thawed out in transportation. Recent legislation is emphatic on this point, and halibut is a very peculiar "critter" in this regard.

Nevertheless, it is a wonderful dispensation of Providence that provides this poor man's "turbot" right at our very doors. And we are justified in working the mine to capacity. Remember that it is but another species of the same genus for which Atlantic waters are scoured clear up to Greenland. I trust to see, however, the Eastern trade name of "Alaskan halibut" replaced by more correct appellation as to the source of origin of these fish. Branding of the product should be insisted on whenever the fish are brought in to a local port. This, together with Government inspection, and grading of the manufactured article, would make for the abolition of train loads of halibut hauled over the C.P.R., en route to the States, flaunting banners, which are not only misleading, but highly derogatory to Canadian enterprise.

UTILIZING FISH WASTE

By J. W. McGRATH.

Study the statistics of Canada and United States, which record the number of cattle that roam the prairies and it is easily ascertained that an enormous decrease has materialized and that there are absolutely less cattle in Canada and the United States to-day than ten years ago. Side by side with this extraordinary decrease has come the constant rise in nearly all meat values.

Everyone knows that every effect is the result of a cause, and therefore, it may be asked why an industry of such vast proportions is suffering such a universal decay. Various causes have contributed to consummate the change. Feed has become very expensive, and pasture lands have been converted into wheat fields.

The cost of fish is relatively cheap compared with meat; its composition contains fatty as well as tissue-giving material, and these things form a logical and strong plea towards a universal utilization of fish for food.

Now that circumstances tend to a more extensive development of the fishing industry it is imperative that a remedy be found to check the enormous waste in the by-products. It is to be deplored that this extravagance is due to ignorance on the part of the fishermen themselves or want of facility in the marketing of such products.

Perhaps in Newfoundland, whose waters on the "Grand Banks" team with cod; and where the codfishery forms the staple industry of the people this enormous waste is best observed.

It is a true statement that in the annual codfishery of Newfoundland alone 20 per cent. of saleable products are thrown away. This amount of waste material if manufactured into food-stuffs and manures would be worth approximately two million dollars. Just think of it—a clear two millions wasted every year!

This is not exageration and can easily be confirmed with figures. Take for example 60 ordinary codfish weighing on an average 6 lbs. each. This gives a grand total of 360 lbs. When dry this weight of "green" fish turns out one quintal of 112 lbs. of cod worth $6.50.

These 60 cod would have approximately—

	Lbs.	
Heads at one lb. each	60	
Backbones	15	
Entrails	40	
Liver	12	
Tongues and sounds	8	
Giving a total of	135	
Heads when dried, 15 lbs. at 2c. lb.		$ .30
Backbone, 15 lbs. at $12 ton		.09
Roe, part of entrails in season		.40
Liver, one gal.		.30
Tongues and sounds, 8 lbs. at 4c. lb.		.32
Total value by-products		$1.41

which is roughly one-fourth the price of a quintal of dry cod.

Here is a splendid opportunity to establish a new industry as a side line in conjunction with the regular fishing trade. It would not be a question of finding consumers for the eatable parts. All that is necessary is initiative to float this business, which sooner or later will be profitably established.

No one will dispute that fish is more extensively used as a food than formerly; and why would it not be so, since those who recognize the value most and recommend its use most strongly are renowned doctors and scientists.

Sir James Crichton Brown, M.D., D.Sc., etc., of England said: "It cannot be too strongly insisted on that for working people of all classes fish is an economical source of all energy necessary to enable them to carry on their work, and that for children and young persons it furnishes the very stuff that is needed to enable them to grow healthy and strong."

What then, is to be done about this shameful waste, when will this extravagance be obliterated? This is a grievance that may be redressed with profit.

Trade Inquiries

The names of the firms making these inquiries, with their addresses, can be obtained only by those especially interested in the respective commodities upon application to : 'The Inquiries Branch, The Department of trade and Commerce, Ottawa,' or The Secretary of the Canadian Manufacturers' Association, Toronto, or The Secretary of the Board of Trade at London, Toronto, Hamilton, Kingston, Brandon, Halifax, Montreal, St. John, Serbrooke, Vancouver, Victoria, Winnipeg, Edmonton, Calgary, Saskatoon and Chambre de Commerce du Montreal.

Please Quote the Reference Number when Requesting Addresses.

773. **Hake.**—Canadian exporters of hake are invited to correspond with Havana firm of commission merchants.

804. **Codfish.**—First-class Canadian exporters of codfish are invited to correspond with a firm of brokers in Cienfuegos (Cuba).

807. **Codfish.**—Inquiry is made by firm of brokers in Matanzas (Cuba) for the names of Canadian exporters of codfish.

809. **Codfish.**—Canadian exporters of codfish desirous of extending their trade to Cuba should correspond with large Santiago de Cuba firm.

813. **Codfish.**—A Havana firm of commission merchants would like to hear from Canadian exporters of codfish.

815. **Codfish.**—Canadian exporters of codfish are invited to correspond with firm of brokers in Santiago de Cuba, Cuba.

SOUTH AFRICAN WHALING.

In 1913 six whaling companies carried on operation in Natal with a fleet of 25 whalers. About 1,250 whales were captured—650 humpbacks, 250 sperm wales, 250 fin whales and 50 blue whales. The products obtained were about 7,985 tons of oil, 3,888 tons of fertilizers, 43 tons of 'finners,' and 14 hundredweight of whalebone, the whole being valued at about £140,000.

The returns show a falling off in the number of humpback whales captured, and only one of the six companies paid a dividend.

THE OYSTER FISHERY OF PRINCE EDWARD ISLAND

The Evidence of Dr. J. W. Kier Before the Dominion Royal Commission.

Prior to the exploration by Public Oyster Fishermen all of our natural oyster areas were very heavily stocked, a good fisherman with tongs would be able to secure six to eight barrels of oysters per day. To-day under the Public Fisheries system in vogue half a barrel per fisherman per day is a good average catch.

The problem of the Prince Edward island oyster fisheries today is the replenishing of her only depleted public fishery and the establishment of private cultivation.

The chief reasons for the growing depletion of our public beds has been a lack of knowledge on the part of public fishermen as to the extent that nature, through reproduction, was capable of off-setting the yearly catch, and their inefficient Government protection.

To remedy this condition private cultivation appealed, from a monetary standpoint, so strongly to our local Government that they have taken over the oyster fishery and rented areas suitable for oyster farming. That the possibilities under private cultivation are enormous as compared with the public fisheries can easily be seen when we consider that the private culturist takes every precaution against loss by natural enemies, his areas are thoroughly cleaned yearly, and the oysters marketed by him are replenished and offset by placing at the proper season large quantities of clean material suitable for catching spat.

Oyster farming in Prince Edward Island is in its second season.

The greatest development of this industry in this Province has taken place in Richmond or Malpeque Bay, where about 3,000 acres have been leased for a term of 20 years with privilage of renewal; the yearly rental is one dollar an acre for the first five years, three dollars an acre the succeeding five years, and five dollars per acre the following ten years.

The early stages of our oyster fishery were marked by, Spring, Fall and Winter fishing on the ice, with the sacrifice of immature and spat oysters. The intervening efforts of the Government to conserve this fishery, i. e., prohibiting winter and spring fishing, and eventually shortening the Fall fishing, although staying the rapidity of depletion, has not tended materially to the replenishment of the public beds.

The reason for this can be understood when we consider that along with the marketable oyster our fishermen took yearly and two year old oyster and all attached spat, which being culled on shore was invariably destroyed, efforts were not made to clean these beds at the proper time to insure a yearly setting of spat. Provisions were not made for combatting the natural animals of the oyster, which resulted in the beds becoming covered with silt and overrun with star fish.

Seven oyster companies are actively engaged here in oyster cultivation, two are equipped with the most modern appliances for oyster farming, and expended last season between 20,000 and 30,000 dollars each, and have on their ground several thousand barrels of seed and young oysters. The last year's growth of these oysters has come up to every expectation. The smaller companies have all done considerable work along the line of cleaning and preparing bottom for spatting this year, and accumulating shell to set for spat this season, from barren beds set aside by the Government for that purpose.

Oyster brood is running freely at the present time. The mature female oyster liberates between 16 and 100 million eggs yearly. Oyster farming owes its great success in that it makes provision for catching this spat. Spatting will take place about the third week in August.

Three Government boats have been employed this summer destroying star fish on the public beds, while the companies have devoted considerable time to the destruction of star fish on their beds.

This industry, which is now in its infancy, will undoubtedly become one of the largest assets of Prince Edward Island, all our waters being naturally oyster-producing and containing oyster spawn. The large areas of oyster bottom at our command suitable for spat production require but the application of proper materials for spat catching to insure the quantities of young oysters necessary to make this industry the great success it is destined to be.

It is estimated that one acre of good spatting ground which has been properly set with 500 bushels of shell which have taken a good spatting, will in its second year produce 1,500 bushels of seed oysters, which is sufficient to seed five acres.

Well established oyster bottom should produce annually about 200 barerls of marketable oysters per acre.

The present price of Malpeque oysters ranges from 8 dollars to 12 dollars a barrel.

A paper which had been prepared by Professor Shaw on the subject was not read for the reason that it was in print and copies of it were before the Commissioners. It will be dealt with more fully in a subsequent issue.

The witnesses were then subjected to a series of questions by individual members of the Commission. Professor Shaw and his co-witness stated that they were of opinion that the industry would be restored to its former prosperity, in about ten years' time; in fact, they said, greater quantities of oysters should be produced by that time than formerly. They gave the value of the output under present conditions at approximately sixty thousand dollars (for 1913), and as to the future, the witnesses stated that they looked forward to an excess of the maximum production of former years, which was five or six times as great as to-day. There was a very large area of cultivable bottom which when brought into cultivation should exceed it many times over. The industry employed about a thousand men and, when at its height, had in use about 650 boats. The income, approximately, of the men engaged in the business was in the vicinity of $200 a season; the season, of course, was very short.

Dr. Keir then explained certain technical expressions which had been used by him in his memorandum. Asked whether it was very difficult to keep the beds free from pests, Dr. Keir replied that it would not be difficult if it were properly undertaken, but it was never under the public system. Last year saw the

start, and this year there were three Government boats clearing the beds, a very good measure of success attending the undertaking. The witness saw no reason why, with proper care and the expenditure of necessary money, the industry should not be restored to its prosperous position, because there were natural, oyster-producing areas. The witness gave the capital invested in the industry at about one million three hundred and eighteen thousand. As to market, he said that there were no Canadian oysters shipped outside Canada, nearly all being used at home, but the fashionable clubs in America were good customers. There would be no difficulty in securing a very good place in New York for Island oysters—which were nearly all taken in the local market—and altogether the outlook for the industry was roseate. It was stated by the witnesses in reply to a question by Mr. Lorimer that had the present regulations not come into force there would have been an almost complete disappearance of the industry in a short time. They were entirely satisfied with the nature of the regulations. The local oyster, they said, commanded a higher price than the American — the difference being about 100 per cent. The question of sewerage was discussed, Professor Shaw pointing out that the sewerage from Charlottetown could not contaminate the oysters in the beds in the vicinity of the city. He has no doubt whatever in his own mind as to the absolute purity of the oysters in the rivers.—Charlottetown Guardian.

Motor and Sail

A Ballad of Gasoline.

'Twas in a little fishing port, that straggles close beside
The salt, sea-waters rush and roar, and paddles in the tide.
A sailboat, somewhat worse for wear, with slatting sheets crept by
The outer harbor entrance and the buoys between that lie.
Till at the wharf, they warped her in, her long and slender snout
A-sticking o'er the saucy stern of a motor fishing boat,
From out whose inward parts a strong and oily smell did float.

And while I stood a-gazing there in a green land-lubber way,
Dumfounded quite, in wrathy words, I heard the sailboat say:
"You stinkin' noisy, splutterin' skunk, You're one o' the hybrid breed,
That's workin' to weather o' me and mine, an' braggin' about your speed.
And takin' the wind right out o' my sails along of your gasolene;
It passes me what the eyes of men can see in a grease-machine.
Instead of a handsome spread o' sail, and the swing of sheet and boom,
You yank and crank on a sticky shaft, in a would-be engine-room.
Instead of "the breath of Heaven to speed," the wind for friend or foe,
You suck the strength o' stinkin' oil, let the breeze blow high or low."
While thus the sail-boat sneering spoke, the other's wrath was rising,
And now, protesting, butted in, with logic most surprising.
"For pet-names and for compliments, so lovingly bestowed,
Now unto you, my thanks are due, though you scorn my fishing mode.
We may not be so picturesque, in the poet or painter's eyes,
Perhaps, with you, in the landsman's sight the palm for beauty lies,
But the fisherman knows on a flat, calm day, when the breath of Heaven fails,
And blesses the power of oil above your idly flapping sails,
Romance and charm are splendid things and I fain would see them thrive,
But the daily bread of the toiling throng in the busy human hive
Has the foremost claim—" Here the tramp of boots, came sounding down the pier,
The sail-boat skipper, and his crew, in earnest talk, drew near.
"I hope that engine I ordered will come," quoth the skipper in hasty jerks,
Before the good fishin' comes on, and besides, I'm anxious to see how it works"—
As I thoughtfully turned away from the wharf, the men and the fishing gear,
I glimpsed on the face of the motor a smile, on the sail-boat a look of despair.

—CECIL BOYD.

LAKE FISHERIES EXHIBIT.

A splendid exhibit of lake fish is to be seen at the stall of the F. T. James Company at the Canadian National Exhibition. Every morning an express shipment of fresh fish is received and the display changed and re-iced daily. In addition to the fresh fish display, the James Company have a cold storage exhibit of frozen lake and sea fish.

DEMAND FOR SALT FISH.

The war has created a new market for our salt fish, and consequently there is no doubt but an advance in prices will result.

Last week Boston fish markets received a hurried call to ship salt fish of all varieties to European countries, because of the sharp rise of all meat foods in European nations.

Immediately efforts were made to consign a large shipment to London for the people who cannot afford to pay the high price for meat. Fishermen from England and other European nations engaged in the war have ceased to put to sea, for fear of capture by foreign warships, and fishing is at a standstill.

The dealers of the new fish are elated over the conditions and predict that the season will rank as the best in the fishing industry of New England. Gloucested has been asked by Boston dealers to contribute their quota of fish for the European markets.

Our Nova Scotia dealers should be awake, and no doubt they are to this new market. Yarmouth being one of the leading ports of export for this commodity will participate in the demand, and much good will result.—Yarmouth Herald.

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company).

Market is a little excited at the moment, due to European War troubles.

All imported Fish has advanced some, notably the Sardines in oil, Herrings in tins and in the pickle. Stocks of these goods in first hand are limited and prospects to get new supplies very poor.

Local fishing is very satisfactory and very small advances have taken place considering the sudden advance on imported stuff.

New Labrador Herrings are arriving and selling freely at fairly good prices.

Due to danger of exporting, the market on Codfish is not very active and prices have a tendency to sag.

Oyster season opens up 1st of September next and the trade is getting ready to handle the rush of orders that are piling up for the occasion.

Fresh Fish.

Mackerel	per lb.	.11
Gaspe Salmon	per lb.	.16
Halibut	per lb.	.11
Haddock	per lb.	.05
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Buck Shad, piece	per lb.	.15
Blue fish	per lb.	.12
Live Lobsters	per lb.	.24
Alewives, apiece	per lb.	.03
Whitefish	per lb.	.13
Pike	per lb.	.08
Perch	per lb.	.06
Bullheads	per lb.	.12
Roe Shad, piece	per lb.	.60

Canned Salmon

Red Sockeye Salmon, 4 doz. case	9.00
Red Cohoes Salmon, per cs. 4 doz.	6.50
Pink Salmon, per cs. 4 doz.	5.00

Smoked Fish.

Haddies, per lb.	.08
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrings, box	1.00
Smoked Eels, per lb.	.12

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.12	.13
Salmon, Red—Steel heads, per lb.	.12	.13
Salmon, Red—Sockeyes, per lb.	.09½	.10
Salmon, Red—Cohoes or Silvers, lb.	.08½	.09
Salmon, Pale Qualla, dressed per lb.	.07½	.08
Halibut, white western, large and medium, per lb.		.09
Mackerel, Bloater, per lb.	.07	.08

Frozen Fish—Lake and River.

White fish, large	per lb.	.10	.11
White fish, small Tulibees	per lb.	.06	.06½
Dore, dressed or round	per lb.	.08½	.09
Pike, dressed and headless	per lb.	.06½	.07
Pike, round	per lb.	.06	.06½

Pickled Fish.

Salmon, Labrador, Tierces, 300 lb.	20.00
Salmon, Labrador, Brls. 200 lb.	15.00
Salmon, Labrador, Half Brls., 100 lb.	8.00
Salmon, B.C., Brls.	14.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.00
Herrings, Labrador, Half Brls.	3.25
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Quebec Sardines, Brls.	5.50
Quebec Sardines, Half Brls.	3.00
Scotch Herrings, imported, half brls.	8.50
Scotch Herrings, imported, kegs	1.35
Holland Herrings, imported milkers, half brls.	7.00
Holland Herrings, imported milkers, kegs	.80
Holland Herrings, mixed, half brls.	6.50
Holland Herrings, mixed, kegs	.75

Salt Fish.

No. 1 Green Cod, large Brl.	
No. 1 Green Cod, medium, brls.	8.00
No. 1 Green Cod, small, brl.	7.50
No. 1 Green Cod, Haddock, medium, brl.	
No. 1 Green Cod, Haddock, small, brl.	
No. 1 Green Cod, Pollock, medium, brl.	7.50
No. 1 Green Cod, Hake, medium, Brl.	6.50
No. 1 Quebec Eels, large, per lb.	

Dried and Prepared Fish.

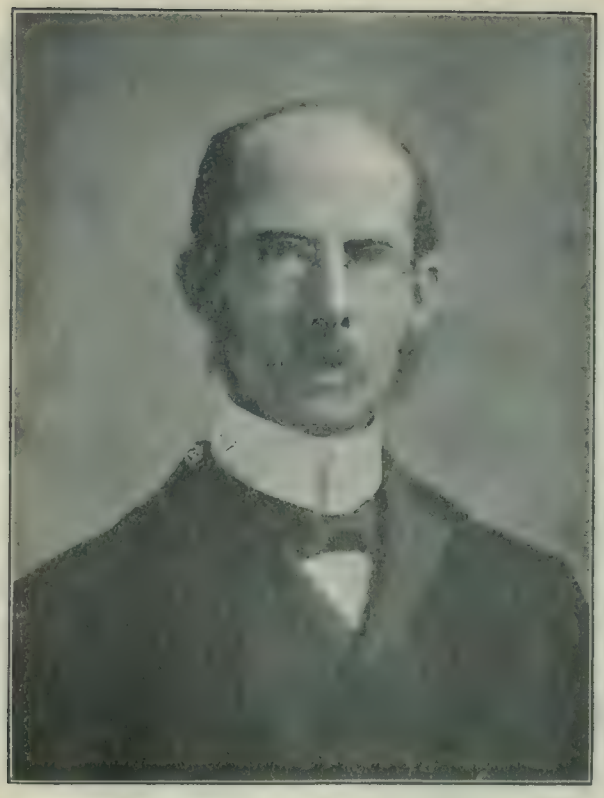
Dried Hake, medium and large, 100 lb. bund's	7.50
Dried Pollock, medium and large, 100 lb. bund.	7.50
Dressed or skinless Codfish, 100 lb. cases	7.00
Boneless Codfish, 2lb. blocks, 20 lb. boxes, per lb. .07	.08
Boneless Codfish, strips 30 lb. boxes.	.12
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes	.13

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysters, per barrel	
Malpeque shell oysters, selected, C.C.I., per barrel	12.00
Malpeque shell oysters, selected J.A.P., per barrel	
Malpeque shell oysters, selected XXX, per barrel	
Malpeque shell oysters ordinary, per barrel	
Malpeque shell oysters, caraquets, per barrel	
Clams, per barrel	6.00
Mussels, per barrel	5.00
Live Lobsters, medium and large, per lb.	.24
Boiled Lobsters, medium and large, per lb.	.26
Lobsters—New Crop—1 lb. flat tins, per case	24.00
Lobsters—New Crop—½lb. flat tins, per case	25.00

A GOOD SALMON CATCH.

The Wilson Brothers, of Lorneville, down the bay from St. John, recently netted 346 salmon in one night and sold them for $422.50. Many large catches have been made this season.



MR. ANDREW A. HALKETT,
Naturalist to the Marine and Fisheries Department, who will supervise the Government Fisheries Exhibit.

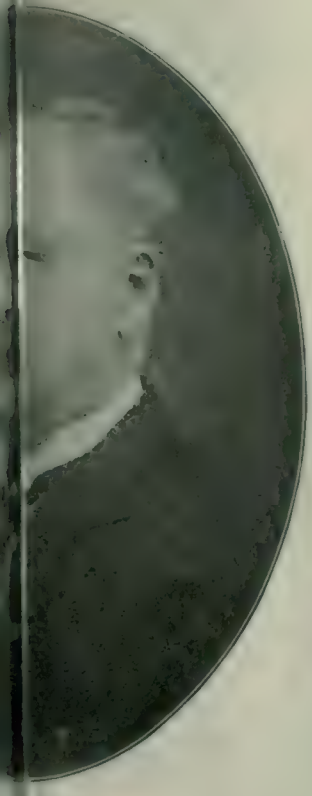
The Dominion Gover
Exhibition, Toronto, wi

MR. F. T. JAMES,
President of the F. T. James Company. One of the exhibitors at the Exhibition.

HON. JOHN
Minister of

nt Building, Canadian National
the Fisheries Exhibit is located.

MR. WILLIAM A. FOUND,
Superintendent of Fisheries, to whose efforts the organization of the Fisheries Exhibit is largely due.



UGLAS HAZEN.
e and Fisheries.

MR. A. H. BRITTAIN,
Managing Director of the Maritime Fish Corporation,
One of the exhibitors at the Exhibition.

Who's Who in the Fishing World

No man connected with the Fish business holds the respect of all who have come in contact with him to a greater degree than the subject of this sketch. The name of "Guest" is associated with the fish business throughout Western Canada and even to the distant Pacific and Atlantic shores hosts of business friends are glad to acknowledge the fact that William John Guest is numbered as one especial friend in Winnipeg.

Born at Berlin, Ontario, 2nd December, 1852, when about 5 years of age his parents removed to Kincardine, where he attended school, but the virgin fishing grounds of Lake Huron cast their spell on the boy, and

instead of concentrating his attention and energies to his school work, the lure of the fishermen's nets had too strong an attraction and thus he drifted into the life of a practical fisherman,—a calling which had much to do with the business undertaking he devoted himself to in later years.

He began fishing on his own account at 14, setting nets in the evening and lifting them the following morning, and thus was enabled to assist his father during the day. He finally, in 1872, entered the employ of a fishing concern and continued there until 1881, when he turned his steps towards the West. The fishing industry, however, in the early days on Lake Winnipeg was not sufficiently developed to allow of him engaging in the calling he loved so much, and necessity compelled him to take other employment. It was not until 1889 that he returned to the "business"; during the winter of that year he went out to fish in the northern part of the country.

The year 1891 saw the foundation of the present business laid. Mr. Guest, or "W. J.," as he is familiarly known, borrowed a horse and wagon and also sufficient money to buy enough fish and the premier fish merchant of the West commenced his peddling rounds on his own account. The following year he rented a Main street store, a location in the older part of the city which is well remembered by the old timers, and employed an old fisherman friend to assist. Competitors looked askance, vowed threats of dire failure, and predicted the fall of the now popular "W. J." But "you cannot keep a strong man down," and, needless to say, nothing could drive him out of business. Ultimately it was found necessary to purchase a site on Main street in order to allow of the proper development of the business.

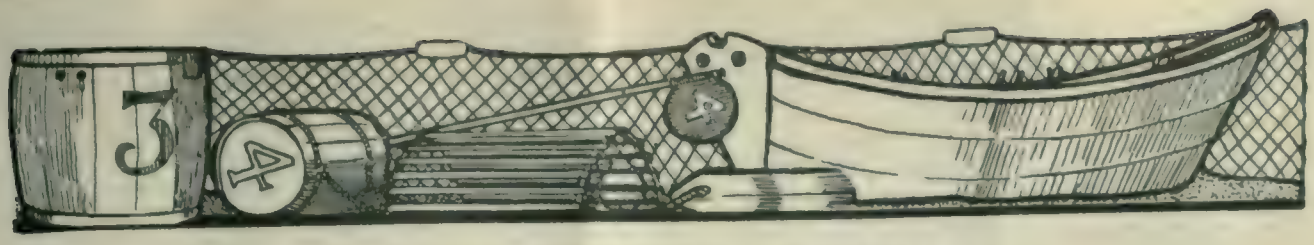
Business continued in this new location until 1905, when the W. J. Guest Fish Company was formed by Mr. Guest and Mr. Wm. Douglas, who became associated with Mr. Guest in the early summer of 1904. The wholesale part of the concern was developing very rapidly and, realizing the opening for an exclusive wholesale fish and oyster house, the retail part of the concern was sold out and a new warehouse on the bank of the historic Red River, overlooking St. Boniface from the Winnipeg side of the river was constructed. This warehouse has since been enlarged and extended and is the largest fish warehouse in Western Canada.

The cold storage was also enlarged and remodelled, and the plant equipped with a Linde-Canadian Compressor. Mr. Guest still continues as President and General Manager, whilst "Douglas" looks after the financial destiny of the business.

Mr. Guest assisted some years ago in the formation of the Northern Fish Company, Limited, of Selkirk, which company is the principal producer of fish on Lake Winnipeg and Mr. Guest still continues as a Director in this concern. In addition to the production of the far-famed Lake Winnipeg whitefish, the Northern Fish Company conduct a very large freighting business between Selkirk and the Northern part of New Manitoba as far north as Norway House.

There is no line of business more apt to lead to failure than the fish business and when it is realized how far Winnipeg lies from the actual point at which fish are caught and produced, great praise and congratulations are due Mr. Guest for the pioneer work he did in the early days. When refrigeration was practically an unknown science and shipping facilities crude compared with the arrangements of 1914.

The success of Mr. Guest and his company are indications of success achieved through unfaltering determination, steadfast principal and high ideals, and his friends from coast to coast join in wishing "More power to Guest," and long may he continue in the business.



THE ATLANTIC FISHERIES

YARMOUTH, N.S.

(From Our Special Correspondent.)

The month of July has been a kind of a trying-out month in Yarmouth for new fish products, put up by new fish firms, with the idea of opening up new markets. July and August are very poor months for the export of fresh fish. There are only a few kinds which will stand shipping, no matter how carefully they are iced. In consequence of this the catches—or a large portion of them—are manufactured here. In former years this has consisted chiefly of dry curing the product then putting up a large portion of it in drums for the West Indian market, and making boneless fish out of the remainder. For the past year or two, only two firms—The Yarmouth Trading Company and Parker Eakins, Ltd.—have been handling fish in any quantities, but this year the Consumers' Fish Company and the Gateway Fish Company have entered the field. So many new boats have entered the fishery that there has been no trouble in securing the necessary fish for these extra firms. They have gone into all branches of the business except canning, and that will probably come later. The business is so new, though that this year the firms will not be represented in any of the big exhibitions, but as this is a form of advertising that is looked on with great favor by the directors of one of these firms at least, there is no doubt but what future years will see them to the front in this respect. The local exhibiion, which is the largest in the province outside of Halifax, will probably have the largest fisheries exhibit it has ever had.

Even in the few short months these firms have been working, their goods have commenced to work up a demand, particularly in the United States. That it pays to put up a good product has been amply demonstrated by one of them at least as a recent shipment of pickled fish brought a cent a pound more than other fish of the same character which went across on the same boat, owing to the extra care given to it.

The present critical state of affairs in Europe is going to have a serious effect on the market. The lobster canners still have a large portion of this year's stock on hand, and as the two principal markets for canned lobsters are Hamburg and London the outlook looks serious. Gloucester, too. is worrying over the situation because they think it is going to cut short the supply of fishermen for their fleet. They fear that many of the men who man their vessels will be kept at home, and it is also pointed out that among the Newfoundland and Nova Scotian fishermen many are members of the naval reserve and their enforced absence from the grounds will cut short the supply of "green fish" which goes to Gloucester in such large quantities for curing and shipping.

It is a wonder that the American sportsmen, especially those who go to Catalina and other points on the California coast for tuna have not as yet "tumbled" to the possibilities of sport in the tuna of Nova Scotia. Tuna (albacore or horse mackerel, as they are called locally) are caught in great abundance off Yarmouth principally in the traps and weirs. During the month of July 296 cases (148,000 pounds) have been sent from this port—and most of them were taken within thirty miles of the town. Your correspondent remembers being in Clark's Harbor about twelve years ago and seeing two or three of these big fish lying in the "wash" on the shore where they had drifted after having been killed in the trap. In reply to a question he was told they were considered a nuisance; that they were no good for consumption. One or two had been shipped as an experiment, but the returns had not been sufficient to warrant further shipments. But what a difference a few years makes. Now they are an important item of revenue to the traps and materially help to make dividends. The prejudice against them locally as an article of food is still as strong as ever—it is doubtful if half a dozen of the men who make a business of shipping them have ever tasted them—but that may be conquered in time.

Swordfish is another thing that is new to us in Yarmouth. I believe that last autumn was the first time it had ever been sold at retail in a local market, and I do not remember having seen it since. It is a staple article of food in Halifax and the adjoining sections of the country, but the prejudice against it is hard to overcome. In Lunenburg, where hundreds are caught, I never heard anyone say he liked it, but it is a good table fish, and many think it is halibut when it is first put before them. The only two fares of swordfish ever bought in Yarmouth were bought during July by the Consumers' Fish Company for shipment. They were landed by the Lockeport schooner Lydia May, and consisted of 45 and 50 fish respectively.

Butter-fish is another which has only been handled commercially during the past two years. It is generally taken in the herring weirs and is a tasty little fish. During last season and this, the local consumption has been large, and last year large quantities have been shipped. The season has just opened for them this year, and only three barrels have so far gone forward.

Another edible fish which we have in abundance is the flounder, but so far none of our fishermen have had sufficient enterprise to try a shipment of them. There is a small local demand, which is supplied by boys fishing off the wharves. The consumers are principally the Hebrews who cure them themselves and use them quite freely. This is a field which could be developed as the flounder is abundant all along the coast.

The exports during July were:

Fresh salmon, cases	156
Fresh alewives, barrels	3
Albacore, cases	296
Pickled fish, cases	325
Clams, barrels	1,081
Dry fish, drums	107
Swordfish, cases	90
Fish oil, barrels	36
Canned lobsters, cases	53
Salt herring, barrels	35

Sturgeon, cases	5
Cod oil, barrels	17
Eels, barrels	25
Periwinkles, barrels	40
Butter fish, barrels	3
Finnan haddies, boxes	9
Live lobsters, crates	107
Salt mackerel, barrels	13
Pickled codfish, cases	10
Boneless fish, boxes	4,172
Fish waste, barrels	178
Halibut, cases	109
Tongues, half-barrels	3
Fresh mackerel, barrels	1,470

To London: 299 cases Canned Lobster.
To Hamburg: 100 cases Canned Lobster.

CANSO, N.S.

(From Our Special Correspondent.)

The shore handliners have been doing splendidly during the month of July. Lately, those who have made use of a line or two of trawl as opportunity offered, have brought in larger fares as a result. One Canso boy, fishing alone in a motor-boat during the week ending July 11th, stocked $95.00, clearing about $86.00. Not a bad week's work. The prices ruling here at present are as follows: Steak cod $2.00, cod and haddock $1.25; pollock 60c. Dogfish are reported plentiful on the outer grounds.

Matthews and Scott are having their wharf property greatly enlarged. Contractor Hagerty of Mulgrave, who built the extension on Whitman's wharf here several years ago, has been busy on the job for some weeks past, and is still at work.

The Gloucester schooner Squanto, Capt. Wylie Rudolph, arrived in on her way home from the spring trip on Tuesday, July 14. That same evening one of the crew, James Fitzgerald, of Whitehead, this county, died almost without warning, as the result of a fit, to which he was subject, and was interred in the Roman Catholic cemetery here.

The Albert J. Lutz, Capt. Apt, tied up to the Maritime Fish Co.'s wharf the first of this week with a 38,000 lb. trip of halibut from the Anticosti grounds. After landing her fare, she sailed again on Thursday, the 23rd.

Much interest and some amusement has been aroused along the waterfront here at present by the rather strange case of the M. C. Morgan, a fishing boat of about 16 tons brought here from Richibucto, N.B., almost a week ago, by the coaster Yarmouth Trader. The boat, which is said to be three years old, is built on old lines, being almost 12 feet in beam and having a house aft, but no engine, and is for sale. The owner, Mr. Morgan, a native of Newfoundland, though now living in Boston is not a sea-faring man, and is anxious to secure some person who will pilot him and the boat to Boston, where he hopes to make a sale to some of the Italian fishermen there. Though he has been dickering with a number of parties here, he has not yet secured the needed skipper.

ONE OF CANSO'S BUSY FISH WHARVES.

As anticipated in my last month's report, Mr. A. Fader, former manager of the Canso branch of the North Atlantic Fisheries, is now in the business here as manager for himself, with prospects pointing to success.

Under the capable management of Mr. P. T. Smith, the Portland Packing Co.'s first season here as handlers of fish other than lobsters is proving a successful one.

About eight millions of the young lobster fry, which have recently been hatched out at the Canso hatchery, were taken to Halifax this week by the government steamer Thirty-Three. They were placed in Bedford Basin as an experiment, under the superintendence of M. Alfred Ogden, the hatchery expert. The young lobsters in the past have always been liberated a short

distance out to sea. Many fishermen and others who take an interest in such matters, have often expressed their fears that these delicious young morsels, thus early taken from the care of the other inmates of the sea, would probably be devoured more or less in a wholesale way. In the secluded waters of Bedford Basin, the experimenters hope to mature the fry with greater sucess. The result of the scheme will be watched with interest.

NEW BRUNSWICK NOTES.

(Special Correspondence.)

The sardine catch so far this season is probably less than one half the average up to August. Few of the packers have had enough sardines to keep their factories at work more than half time. High prices have been paid the fishermen. Packers still hope for an average pack, as often, in August and September the catches are larger than they can handle.

In Charlotte County line fishermen have been making fair catches, but net fishing has been poor.

Reports from the North Shore of the Province are to the effect that mackerel have been plentiful there, being taken in good quantities by nets and seines for some weeks. A heavy run of mackerel appeared at most points on the North Shore, and were in evidence for some weeks. High winds interfered with fishing operations more recently, and reports from some points say the run of mackerel has passed. Cod and Ling are reported to be scarce on the North Shore.

ST. JOHN, N. B.

(Special Correspondence)

Although individually the Gaspereaux fishermen in the harbor did well in the season just closed, the catch was below the average, owing to curtailment of weir privilages and small number of fishermen engaged. Nearly 15,000 barrels of gaspereaux were handled by local dealers, about one half of this being salted for export. Fresh gaspereaux were sold largely at $1.00 per hundred, and salted at $4.50 a barrel.

Very few sardines have struck into the harbor, and the catches have been insignificant.

LUNENBURG, N.S.

The following is the last record of the Lunenburg fleet's catch:—

	Qtls.
Eva Jane—Schnare	700
Artisan—Walters	1,000
Mantanzas—Lohnes	600
Hazel Ritcey—Ritcey	600
Assurance—Zinck	500
Clintonia—Mack	725
Mary D. Young—Berringer	700
John Henry McKenzie—Geldert	325
Frank J. Brinton—Duggan	400
Defender—Knickle	500
Evelyn Miller—Miller	500
Annie L. Spindler—Spindler	1,025
Coronation—Tanner	325
Donald L. Silver—Silver	400
James Burton Cook—Cook	900
Leta J. Schwartz—Schwartz	200
W. H. Smith—Naas	500
Jennie Duff—Wambach	750
R. L. Borden—Himmelman	850
Revenue—Mossman	850
Delawana—Cook	550
Hawanee—Cook	550
Arcola—Zinck	600
W. C. Smith—Selig	550
Nobility—Dagley	300
Lottie A. Silver—Silver	500
Muriel Winters—Winters	1,000
Ada M. Westhaver—Young	300
Uda A. Saunders—Spindler	800
Gladys B. Smith—Smith	1,000

CANADIAN FISHERMEN CANNOT RUN GREEN FISH DIRECT TO U. S. PORTS FROM BANKS.

The question of entrance and clearance of Canadian fishing vessels, with fares of fish to be landed at Gloucester, Mass., is the cause of no little agitation in that pre-eminent city of fisheries. A conference was held at the Gloucester Custom House, July 24, between the Gloucester fish dealers and W. W. Lufkin, secretary to Congressman Gardiner. The latter, of course, represented the Congressman. The conference was arranged, following the recent publication of Deputy Collector Albert H. McKenzie's opinion, the main points of which it might be stated are fully agreed upon generally by the dealers, who took up the matter with the Congressman.

In order that there might be no misunderstanding and to avoid possible seizure or trouble to Canadian skippers who might be intending to market their catches direct from the grounds to this port, the matter was presented to the Congressman, who has gone into the situation with the Bureau of Navigation.

After looking at the matter in all its details, Commissioner Chamberlain, Deputy Commissioner Tyree and the Congressman agreed on the following points, which, too, are in accord with the views of the local dealers and with the Deputy Collector McKenzie's opinion:

First.—That under the terms of the Underwood Tariff Bill, green fish can be shipped into this country free of duty by rail.

Second.—That an American vessel with a freighting or merchant marine license can go to any Canadian port and bring fish which were caught by Canadian vessels into this country free of duty.

Third.—That in all probability an American vessel with a freighting or merchant marine license can go to the fishing banks, buy a cargo of fish from a Canadian vessel and bring it into this country free of duty. This is a finer question, however, and the commissioner was not willing to give a definite opinion off hand.

Fourth.—That a Canadian vessel after completing her catch can return to a Canadian port, take out a freighting or merchant marine license and bring the fish to United States ports free of duty.

Fifth.—That a Canadian vessel cannot catch a trip of fish on the banks and then come direct to this country and have them admitted. This the Bureau of Navigation holds as absolutely in opposition to the spirit of our navigation laws, which provides that only American vessels can participate in American fisheries.—Fishing Gazette.

Capt. John McCauley, of Southampton, will sail the tug Alva W. for the Northern Fish Co., Kingsville, Ont., henceforth.

A WHISPER FROM THE PACIFIC

BRITISH COLUMBIA AND THE FISHERIES EXHIBITION.

The Western Fisherman Claims that His Atlantic Brother Can't Beat Him Out in Fish or Fishing.

By F. J. HAYWARD.

A voracious editor who presides over the destinies of the CANADIAN FISHERMAN as intimated his intention of making the August number of this paper a special Exhibition one. It is also intended to have this highly appreciated paper on hand at the Governmet Building at Toronto, where the Department is putting on its educative exhibit. For these reasons, I am instructed to get busy.

I was in Toronto last year for the first Fisheries Exhibit, and there saw many things that proved that we have men in the Department at Ottawa who have the industry at heart. I am not going to laud the work of these earnest officials further, for congratulations will come as they did last year. But I think that it is time that our Eastern friends be shown that there are fish in the Pacific other than the Salmon and Halibut. One hears on every side that the Pacific fish have not the flavor or high qualities that the fish caught in the Atlantic have. To tell the truth, I fail to see where the Atlantic has anything to crow over us with. Taking all for all, the balance is about correct. True, taking fish for fish, there are many differences that follow from the environment of the fish. Of course, the Atlantic has a goodly number of years' advantage over the Pacific; and that many fish are betier cured, better packed, and taste better, we all admit. We also expect our Atlantic friends to admit that we have something also to show them. As an instance, take the cover of this Exhibition number. The halibut depicted there makes the man standing near it look like a pigmy. This is "some" fish all right, but if the Atlantic is looking for size, let her see what we have. If the fish shown on this cover constituted a record for size, let us have the weight, and we will guarantee to beat it. If one of the boats at present discharging has not the equal of this large halibut, all we need do is to go out and catch one, just to prove that I am right.

The majority of the fishermen operating in Pacific waters hail from the Atlantic coasts of the Maritime Provinces, Maine and other American states, and Scandinavia. You will agree with me, then, that we have good men here. Most of these men have received their training in their home waters, and then adapted their learning to suit these waters. A fisherman shows more adaptability than almost any other class of men on earth. To be a successful fisherman he has to use his brains, as successful fishing does not follow from a "rule of thumb" mode of operation. I think that the halibut fishermen are a class unto themselves, for out this way they rarely seek any other species of fish. In fact, all fishing done on a large scale is worked this way. The art of fish catching is a most difficult one. A man who can master the habits of more than one species and always be more or less successful, would in any other sphere of life rise very high. A fisherman must also be willing to adapt his knowledge gleaned in other waters to that of the native whose skill has been handed down from father to son for countless generations.

We have learnt much from the Siwashes, as the native Indians of Puget Sound and British Columbia are termed. Many of these tribes only work when hunger makes it necessary, and perhaps it is owing to a desire to work as little as possible that they have evolved so many ingenious devices for the catching of the Salmon and Halibut. Long before Atlantic fishermen started to growl at the hated dogfish the Siwash had evolved a hook that will allow the Halibut to stay on, but will not let the dogfish take the bait. The contrivance is a crude and clumsy affair, but if it were a matter of keeping the dogfish off the hook alone, the white man might be able to invent something more handy. On the Atlantic the fisherman suffers from the good fish on the hook being mutilated by the dogfish, as much as the hook being entangled in the latter's mouth. But with the Salmon hook this is quite different. The Siwashes made their hook from steel, which they slowly and painfully filed into the requisite shape. To-day European hook manufacturers are turning this Siwash or Victoria hook out by the thousand. But there are sportsmen in this province to-day that will use nothing but the handmade hook, and pay $1.00 each for them.

Environment and weather conditions have gone a long way towards making the one-time Atlantic man a person wedded to his new home. He will in a very short time become such an enthusiast that he takes exception to all remarks about the superiority of the Atlantic fish over the Pacific. He knows that he has at his disposal the same fish that he had on the Atlantic, only that he must adapt his methods of catching them to suit the conditions. Outside of the halibut steamers and vessels, which these days are all auxiliary boats, no fishing is done with the large boats such as Lunenburg, Canso and Digby sent out. The "mosquito" fleet takes care of all the other fish and allows the fisherman to live at home practically continually. The North Pacific fisherman is not subject to the hardships caused by the frost and snow like he had to contend with on the Atlantic Ocean. If he ships in one of the halibutters, he gets occasional "blows," but no ice. As regards a place to live in and work in, on the whole the fishermen of the Pacific are better off than those on the Atlantic.

As I said before, Easterners only know that we have Salmon and Halibut. Buyers think that the halibut must be as thick as caplin, as some seasons they are able to buy so cheap. But one of the reasons for this is that too many people were after the same thing and overproduction always leads to losses and cutting of prices. The fisheries of the British Columbia coast are to all intents and purposes untouched. In fact until Western Canada gets the population and the Pacific states of our American cousins grow so that we may have a market like our Atlantic friends have, the real fisheries of this province will be utterly unworked. Outside of the lobster and mackerel, it will be difficult to mention an Atlantic fish which has no representative here. We have many fish far superior to the Atlantic

species. All we want is a market to sell the fish awaiting to be caught. If we have that, then many incidental matters such as unfair double licenses, needless protection and lack of skill in curing, will adjust themselves. Laws that prohibit expansion will have to be re-called, and freight rates arranged to allow competition. We will not be a heavy competitor of the Atlantic, for those in the industry operated from her coasts will have all they can do to take care of business that will offer around their section of Canada. But we shall have to take care of the Middle West to a very great extent. Money has been spent and a lot of it lost on the Pacific fisheries; but there are always sacrifices looked for from pioneers.

We have around our coasts the following fish, many of them having varieties of their own: Salmon—Steelheads, White and Red Springs, Sockeyes, Cohoes, Humps, Qualla, Bluebacks. Cod—Black, Red, Grey, Rock. Herring in all sizes up to three fish weighing two pounds. Smelts; Soles; Flounders; Halibut; Bass; Perch; Whiting; Shad; Sardines; Oolachans; Crabs; Clams; Mussels; Sea-Trout; Skate; Tuna; Turbot; Sturgeon; Shrimps; Prawns; Oysters, etc. This makes a goodly list, and would make an educative exhibit if transportation facilities would allow the same benefits as the Atlantic fish have. Another thing that would spoil a representative British Columbia exhibit is the fact that the very time that the Toronto Exhibition is held is the time that all who are interested in fish are chasing the wily salmon. Every other branch of the business, excepting halibut, has to give way to the salmon. Wielders of the nets seem to have a right-of-way over all others, much to the discomfort and annoyance of crusty steamship pilots. While men are after salmon, whether they are getting fish in sufficient quantities to pay them or not, they hold on, hoping for a good haul.. The herring grounds are covered with the heavier salmon nets, and the herring fisherman has to cease operations or else risk having his net carried away. Everybody is too busy to think of such a thing as an Exhibition, and unless they are East on business, would not afford the time to pay a visit to Toronto. The Exhibition comes at a wrong time for British Columbia and will not allow her to show what she has to offer. Later on—for I anticipate that the Department will note the tremendous benefits accruing to the industry through its efforts at Toronto—perhaps some city closer to the Pacific will also have another show under the same auspices. But to have an Exhibition a success, it is necessary that fine weather be counted on. If British Columbia were allowed to send her exhibit at the time that suited her best, it would mean that other coasts would be in the same position that she is to-day, and that also the Exhibition itself would be held amidst ice and snow. But if we were to send our collection to some closer point, knowing that the goods had a good chance of arriving in the best of condition, we might be able to get a goodly collection even at this season of the year.

The best that can be sent, is being sent, and the Province given every opportunity at the disposal of the Department. But, as I said before, it is a most difficult thing to send to Toronto in August a representative collection of British Columbia fish. The expense is too great for an individual company to undertake such a proposition. The returns would never warrant the outlays necessary. We are sending what we can, so let it go at that. But what you do not see, in the British Columbia collection, but see in those of the Atlantic. I ask you not to think that absence means inability to ship. It means that Toronto is too far and the season too awkward a one to allow these species to go down. We have them all right, and the chances are that in many cases the species are superior to those shown from the Atlantic. If reports are published to the effect that such and such a fish is getting scarcer, do not worry. British Columbia will give you all you want until such time that the Atlantic fish are able to become numerous again. Then you will not want the Atlantic fish, but will continue to demand ours. I know you will.

BAY CHALEUR FISHERIES GOOD.

Four members of the American schooner Jennie B. Hodgson, wrecked near Caraquet, says the Gloucester Times, were so impressed with the prospects of the Bay Chaleur that they remained at Caraquet to engage in fishing.

The fishing prospects this year have been the best ever, the boats, all of whom are engaged in handlining, averaging from 10,000 to 13,000 pounds of codfish a week. They do not fish Sundays. So well impressed were the members of the Hodgson's crew that four of them remained behind and, securing a boat, will fish together the remainder of the season.

They say that the mackerel fishery in the Bay of Chaleur is thriving and the bay is full of fish. The natives, many of whom are engaged in netting, are making good catches for a month, the fish being of the very largest size. One fisherman took 7,000 one night recently in a string of 35 nets. The fish were so large that the tails had to be turned, the men say. "The opportunity for a good catch by some of our vessels is there," said one of the crew in talking with a Times representative. "All they have to do is go to it. Catches were being made as far as Bathurst."

Besides good codfishing and mackereling, large quantities of salmon are being taken.

NEW MANITOBA FISHERIES REGULATION.

The Fishery Regulations for the Province of Manitoba are hereby amended, by adding thereto the following regulations:—

26-a Nothwithstanding anything in these regulations otherwise provided, summer fishing with sailboats and skiffs only shall be allowed in Lake Winnipegosis from the 16th August to the 30th September, in each year, both days inclusive.

(a) A sail-boat license shall authorize the use of not more than three thousand yards of gill-net, and the fee on such license shall be ten dollars.

(b) A skiff license shall authorize the use of not more than one thousand five hundred yards of gill-net, and the fee on such license shall be five dollars.

2. The mesh of whitefish gill-nets shall not be less than five and one-half inches extension measure until the 1st June 1915, on and after which date the mesh shall not be less than five and three-quarter inches extension measure.

(a) The mesh of pickerel gill-nets shall not be less than four and one-quarter inches extension measure and the mesh of jackfish gill-net shall not be less than four inches extension measure.

The Northern Fish Co., of Kingsville, Ont., has purchased the tug Alva W., together with all other assets that were saved from the fire which partly destroyed the gill net fishery of Westcott and Wright.

THE PACIFIC FISHERIES

From Our Special Representative.

The European Situation and its Effects on the Fishing Industry of Canada

A Cheerful View from the Pacific Coast.

Whilst we all deplore the extraordinary situation that now exists in all Europe, and we as Canadians will one and all do what we can to assist the Mother Country, still we must consider very carefully the effect that the present state of affairs will have on the Fishing Industry of Canada as a whole.

Owing to the fact that I live in British Columbia, it is natural that I consider her position first. Foremost amongst the fishing of this Province comes the Canned Salmon, with the millions invested and the millions of dollars at stake in the business. Our papers seem to have an idea that a general war will drive up the price of Canned Salmon, and all other food stuffs. They say that Canned Salmon is an ideal food for troops. But those in touch with the distribution each year of the packs both from this Province and from the American canneries, fail to see any new demand for the goods. The nations at war have to consider the cost of the goods they give as food to their soldiers. Canned Salmon, whilst most nourishing, is really too expensive to give hungry men. It is also a well known fact that soldiers, especially British, have no great hankering for fish, but demand meat every time. Caterers to the different war offices have never supplied Canned Salmon in large quatities. There is one exception to this, but one that does not affect us at all. The American Canners have succeeded in getting their government to include Canned Salmon as one of the staples supplied to their navy.

On top of this, the war risks at the present time makes the delivered article even more costly. Much of the packs is sold on the c.i.f. basis, and where the packer has to pay the present high insurance, it cuts profits very fine.

This year, as I stated in other issues of the CANADIAN FISHERMAN, the greater portion of the 1914 pack was sold ahead and at good prices. These prices were governed by the law of supply and demand. The supply being limited this year, and the demand heavy, naturally prices mounted. But the higher prices do not mean all velvet to the canner. Fish has been scarce (I speak now of the Sockeye) and so the fishermen have obtained nearly double the price for the raw goods as last year. The run is about over, and once that all contracts are filled and shipped, the canners will come out on the right side, but not much more. To-day they are afraid to ship their orders, as, like everybody else, they are now awaiting to see the outcome of the expected naval engagement in the North Sea. As far as one can judge, the future trade of the whole world depends upon this battle.

The mild cured salmon trade in both Canada and the States is in a rather peculiar position. I should say that there are some thousands of tierces in the cold storages on the Pacific. The pack of British Columbia was sold early in the season. As practically all was bought in Germany, and German ports are now closed, shipments cannot be made. Good mild cured salmon fetches high prices. The German deals largely at the delicatessen stores. From the imported mild cured salmon is made the smoked fish and all other forms of salmon dear to the heart of the German.

Of late there has been a lot of talk about all fish being high on account of the war. I personally am not in a position to know what the Atlantic fishermen are doing, but from my own acquaintance with the men themselves I do not think that the knowledge that a couple of German cruisers are hanging around, will stop fishing, if the fishing is good. On this coast, the boats still continue to go out and arrive with their catches.

Many have had the idea that the grades of salmon used for pickling and freezing will advance. The impression was that the canners would pack every fish that could be conscientiously called a salmon. On the contrary, the canners are doing nothing of the sort. If any trouble arises, it will be from the fact that those who have business offering them will be inclined to listen to others, when their own judgment prompts them to keep on as if nothing out of the way were happening. As far as the Pacific is concerned, there is nothing to warrant prices being "sky high." Prices will be about normal all around.

That this season has already seen advances is true. But, on behalf of the fishing industry, I wish to point out to the trade that the advances are not on account of the war. If this happens our Dominion Government has stated that she will not allow only such attempts. Advances are due mainly to increased cost of the raw material. This has developed from the action of our American neighbours, who passed the act permitting Canadian fish to enter their country duty free. All over the coasts of Canada the raw material has advanced. But we Canadians have not raised the prices. We are forced to pay the same prices as offered by American buyers, if we want the goods. We have to meet the higher bidding.

Whatever the outcome of this war in Europe, there are two countries that are bound to benefit both now and in the future. Canada and the United States are the closest countries to the seat of trouble that can supply food stuffs. This is where the present advantages will come in. The future I anticipate to be even

more advantageous to the two countries. After all is settled in Europe, the taxations and indemnities that will be imposed will tend to increase emigration. There are many thousand desirable citizens of the nations now at war that do not want fighting. They are compelled in most cases to fight. After all is over, those that survive will take care that the same contingency will not arrive again and will gather all their belongings and go to a country where they can follow their trade. This will bring into Canada and the United States many thrifty citizens, who are skilled in all the arts, who are trained artisans, and who will assimilate with the country of their adoption. Canada, for many reasons, will get the pick of these emigrants. In this country they can make a new start, and those with a little capital will take up lands now awaiting development.

But Canada stands to reap a harvest this year outside of her wheat. I refer to her fish. Whilst the seas of Europe are so troubled, fishing will be almost prohibitive. The fishermen are in most cases members of the naval reserves of the different countries that they live in. Naturally, the supplies of Mackerel and Herring going into the American markets will be greatly curtailed. Even if fishing be possible on the large scales that happen in normal times, exports will in some cases be stopped. This looks to be an opportunity for Canada to get her Mackerel and Herring marketed.

The United States, especially the Middle West, is a very large consumer of Pickled Fish. Canada has tried for years to get a share of this market, but for obvious reasons as failed. She has equally as good fish, but has not got anything near the prices that she ought to. This has been the fault of her fishermen, who seem to cling to the idea that the world's markets want and must take only what the fishermen want to give them. It is hard to get into the head of the average fisherman that if they will take the trouble to pack as the markets want, they will get far better prices. If Canada will do this now, this is the very best opportunity she has had and will ever get again.

Dealers in the States do not buy Herring and Mackerel by the barrel alone. Look at the price lists of the jobbers, and you will see these fish all quoted by the count. They buy the same way also. Naturally, they insist upon getting the number of fish to the barrel they ask for, the full weight barrel, and a package that will contain and hold the brine. They will be only too pleased this year to buy our Herring and Mackerel if they can get them in the grades they ask for and are accustomed to import from those countries at present handicapped by war. It is a pity that the Pickled Fish Inspection Act will not be in operation this year. But from what I know of the Department at Ottawa, every official will do all he can to help the industry to get its footing now that the opportunity is at hand. If there are rules that are obstacles in the road to accomplishing this end, on proper representation being made, every facility will be extended to amend such an obstacle.

This opportunity will not end with the close of the present war. As I said previously, we shall have a new population in a short time. These new citizens will be fish eaters, and those of the Slav, Teuton and Latin races are eaters of Pickled Fish. I think, therefore, that we ought to make all haste and get our Pickled Fish standardized in every particular now whilst we have the greatest opportunity we shall ever have afforded us.

Therefore we as Canadians will all do our best to do our share in overcoming the danger threatening our country. We cannot all go to war and fight. But we can stay at home and take care of the families of those who are going, and at the same time by developing the country's trade, help the country as much as if we had gone ourselves.

Harmony

The Motto of the Halibut Fishermen's Union.

A little word comes before my mind that was used quite frequently by a revered Ottawa official at Toronto, during the Dominion Fisheries Exhibit in that city last year. That little word, "harmony," or to give it the Ottawa touch, "harmonious," expresses a peace that we all long for, often in vain.

To come across a body of men banded together and calling themselves a Union, and at that acting in harmony with the capital that employs them, is a rare and noteworthy thing these days. We are so used to seeing the columns of the press taken up daily with accounts of disputes in all parts of the world. This is apt to leave an impression that Unions had no more love for the capital that employs their members than a German has for a Frenchman. I am pleased to state that the Pacific coast can put such a Union on record, and still more pleased that it come from the ranks of fishermen. The idea that capital and labor cannot assist each other is dispelled when we see the Halibut Fishermen of the Pacific busy.

The real official and Sunday name of this union is "The Halibut Fishermen's Union of the Pacific." This was organized in Seattle, Wash., on November 1st, 1912, with the Vancouver or Canadian branch two weeks later. The total membership of this Union is about 1700, one thousand being on the American side, with headquarters in Seattle, and the balance on the Canadian side, with headquarters in Vancouver. This Vancouver office is presided over by the local secretary, Mr. R. Kearley, himself a practical halibut fisherman and hailing from Newfoundland. In fact, the bulk of the members are made up of fishermen from Norway, Denmark, Nova Scotia and Newfoundland. This is evidence sufficient to warrant a picked body of men.

I shall not here go into the rules and constitution of the Halibut Fishermen's Union of the Pacific, except to say that they are placed on a fair-play basis. They look for nothing abnormal from the members, and for nothing out of the way from the fishing companies employing the members. A thorough understanding seems to make this little word "harmonious" meant here. If there are differences that crop up, as there must be, the company officials discuss the matter in hand with the secretary. This secretary, who is a man who has been "through the mill" himself and has been a practical fisherman, discusses the men's side of the question, and between them the matter is adjusted. There is no need for growling, for if there is a grievance, as soon as it can be aired and gone into it will be disposed of to the satisfaction of all. How much better this is than some so-called unions one hears of, which are nothing more or less than hotbeds of discontent, which can never be settled for the simple reason that the members of the union will have nothing to kick about if their grievances were settled.

Every Halibut boat on the Pacific carrying members of the Halibut Fishermen's Union of the Pacific has amongst the crew a man called "the delegate." His business it is to look after the interests of his members, but at the same time he looks after the interests of the

boat owner. He sees that as little waste of grub and gear takes place as is possible. The owner's interests are just as much looked after by this delegate as those members who have appointed him are. He is the sign of the faith that exists between the fishermen and company that employs the fishermen.

By having such a union run on sensible lines, we do not hear of fights as in other branches of business. Both sides consider the other, knowing that they are met together to settle something that will be of a mutual benefit. The employer does not get up on his hind legs as soon as the Secretary approaches him, neither does the Secretary go to the employer prepared to use any other means but amiable discussion. As long as the Halibut Fisherman's Union of the Pacific follows along these lines, it will continue to flourish and be of benefit both to its members and the whole industry.

GENERAL NOTES.

Whaling.

The Canadian North Pacific Fisheries, Ltd., have decided to paint the bottoms of their steam fleet in colors to render the ships as near invisible as possible. It is thought that the present colors are too easily seen by the whales, and so chances of close approach made more difficult.

This company has recently caught one of the valuable "right" whales, and this is said to be the first caught in British Columbia. Needless to say the report of this capture brought to light the adventures of old-timers. Naturally one and all vouch for the truth of their assertions, but many bear a decided Munchausen tinge.

Sturgeon and Caviar.

A few fish are still being caught on the Fraser, sufficient to allow the stores to have a daily display. Inland shipments of our sturgeon are very small considering the demand for them. It may be a matter of price by the time that the fish reaches its destination.

Experiments on the Salmon Roe have not been very successful from a financial point of view. As in the past in other countries, before a regular traffic is established, this must be expected. The New York buyers are becoming alive to the situation, and we look to a fair trade in this commodity in a few years.

Shell-fish.

Prawns such as were described in the July CANADIAN FISHERMAN, are on sale in the Coast cities. They attract universal admiration and are commanding ready sales. This goes to prove again the Pacific has many more varieties of fish to offer than our Eastern friends believe.

Owing to the fact that the grounds are all covered with "sockeye" nets, for the time being herring are scarce. There is an abundance of fish still on the grounds, and after the fishermen are tired of getting after the "sockeyes," which are at present scarce, herring will be sought again.

If the powers that be can be prevailed upon to modify the preesnt herring regulations, the industry will have some chance of being developed. Fishermen feel that they should be allowed a larger scope for their nets and go into deeper water. The heavy license imposed by the Provincial government is also a tremendous handicap. Fishermen are in the position of a man with two bosses, each one asserting that he is the one and only boss. This has been fought in the courts, but either it must be taken higher for settlement, or else we shall have to allow an industry awaiting development, to continue on in the old way. If the Provincial Government claims that the fisheries are hers, then it is her duty to take care of them and to assist the development of her resources. But if the Dominion Government provides the fishery protection cruisers, competent officials, hatcheries, etc., then she alone should have full charge. The payment of two taxes is a hardship that should be removed immediately.

Fisheries Patrol.

The sealing treaty signed by Great Britain, Russia, Japan and the United States, calls for a joint patrol of the fur seal haunts. Up to the present, this was taken care of on behalf of Great Britain by the gunboats "Algerine" and "Sheerwater." But as these vessels are now doing duty in the waters of troubled Mexico, the Canadian cruiser "Rainbow" has been commissioned. To complete the crew drafts of men have arrived from England and from the "Niobe."

The "Rainbow" had to hurry her preparations to come to Vancouver to impress upon a shipload of fractious Hindus that the authority of Canada cannot be defied.

B.C. Fisheries Limited.

The chairman of the Board of Directors in London was on this coast recently. It now looks as if the company will pass out of all existence, as the decision was against further re-organization. It was proposed to fish for halibut, and so utilise the steam vessels owned by the company, but the prices were not attractive enough.

There is no mistake but that the failure of this company has been a set-back to the fisheries of this Province. The fault does not lie with the lack of fish nor with the qualities of them. We wish that this be thoroughly understood by the shareholders of this company.

The assets of the company placed at $1,500,000 were sold to a Mr. Devereaux for $300,000. The statement that this man was acting in the interests of the former directors has been denied. Local creditors have lost to the tune of $75,000, as the amount received has only been sufficient to give the debenture holders 75 per cent of their money; the court ruling that they had first claim.

There are many rumors around as to what will come of the plant and assets thus secured for the above sum, but it is better to have something definite before giving these rumors to readers of the CANADIAN FISHERMAN.

Indictions in a Halibut Trust.

The Federal Grand Jury returned indictions in Seattle in July under the Sherman anti-trust law, against the so-called Halibut Trust. Conspiracy was alleged to control the supply and price of halibut of the North Pacific and North Atlantic waters, marketed through Seattle, Tacoma, Vancouver, Prince Rupert and Boston; to control the price paid to independent fishermen and make their operations unprofitable; and to control prices and prevent competition by the allotment of the markets between the indicted companies.

New Salmon Hatchery.

The Vancouver Exhibition Association is up in arms ove ra report that the new hatchery they suggested is to go to New Westminster. The Association considers that as they put the idea into operation, and with the sole purpose of having the hatchery an adjunct of the Exhibition, to give it to Queen's Park, New Westminster, is unfair.

If it can be arranged, let a hatchery be established in the two places. Both exhibitions draw large crowds

and from an educational point of view ,a salmon hatchery is a valuable adjunct to any exhibition.

Something New.

A Dr. Littlefield of Seattle, Wash., claims that he has produced from chemicals live fish and soft shelled crabs. This is certainly a startling assertion, and the learned doctor further states: "I have learned that the evaporation of water will create life, and the evaporation of water at the natural temperature of the organic species I desire to create, will produce life if the mixture and grouping of the chemical elements are right."

To quote a well known beer advertisement, it may be the water. A peculiar thing about this discovery is the fact that the doctor can only obtain success between March 21st and June 21st. As there is plenty of water to be obtained, there is nothing to prevent those who long for, but cannot obtain, the lucious crab and lobster, from working during the above period. Personally I prefer to go to less trouble, and purchase the original article or go without.

Sea Lions Hunted.

In the July issue of the CANADIAN FISHERMAN, mention was made of the depredations caused by these Sea Lions. Outside of the slaughter of the fish by these animals, the damage done to nets is considerable, nets being treated like so much paper. A short time ago an expedition for the destruction of these sea lions was sent to the Naas and Skeena rivers.

Owing to the difficulty in approaching the animals, extra care had to be taken making a landing on the breeding grounds. The sentinels at the rookeries resented the approach of the hunters and the shooting of them had as much excitement for the hunters as an African big game hunt would have. The result of the expedition was between 500 and 600 animals killed, the exact count being difficult owing to the fact that many were killed in the water and sank.

Halibut.

The catches are averaging up well, and larger shipments of the fresh are going East. As considerably less frozen is being packed than last year, the impression is that frozen halibut will be back to the normal price this winter. Last winter's low prices were a benefit neither to the packer or the Eastern buyer. With prices chopped about, it is difficult to figure out where, when and what to buy.

Science has now determined how to get at the age of a halibut. Esconsed behind the ear, is a bone that, being shaved down to the thickness of a sheet of mica, and held to the light, will reveal through the proper scientific instrument the number of annual rings. These rings are supposed to represent one year each, just as those in a tree.

It is generally understood that Prince Rupert is to be the headquarters of the halibut fisheries. This has been gone into in detail several times, but the rumors of the removals of large concerns to the Northern city, and the interest that the Sound packers are taking, point to Prince Rupert's dreams being realized. The Grand Trunk Pacific is stated to have its through line opened for traffic early this coming Fall.

The month of July saw two halibuters disabled. The Carlotta G. Cox lost her tail shaft on Millbank Sound, and the Borealis got into trouble with her machinery, and had to be towed to Prince Rupert.

HALIBUT ARRIVALS.

June 25th to July 25th.

Arrivals at Vancouver.

June	28th—Kingfisher, New England Fish Co.	70,000
"	29th—Celestial Empire, Can. Fishing Co., Ltd.	65,000
July	1st—Pescawha, Can. Fishing Co., Ltd.	60,000
"	2nd—Victoria, Crown Fish Co	18,000
"	8th—Flamingo, Canadian Fish Co., Ltd.	175,000
"	9th—Knickerbocker, New England Fish Co	153,000
"	12th—Carlotta G. Cox, Can. Fish Co., Ltd	35,000
"	13th—Celestial Empire, Can. Fish Co., Ltd.	80,000
"	14th—Jessie, Crown Fish Co.	25,000
"	15th—Pescawha, Canadian Fish Co., Ltd	35,000
"	16th—Emma H., Can. Fish Co., Ltd.	25,000
"	18th—Victoria, Crown Fish Co.	25,000
"	19th—Flamingo, Can. Fish Co., Ltd.	140,000
"	20th—Kingfisher, New England Fish Co.	125,000
		1,031,000

Arrivals at Steveston:

June	26th—B.C.P.,from Stations, Columbia Cold Storage.	90,000
July	3rd—B.C.P., do. do.	50,000
"	5th—Roman, Columbia Cold Storage	70,000
"	9th—B.C.P., from Stations, Col. Cold Storage	85,000
"	18th—B.C.P., do. do.	26,000
"	20th—Roman, Columbia Cold Storage	90,000
"	24th—Roman, from Stations, Col. Cold Storage	85,000
		496,000

Arrivals at Prince Rupert:

June	25th—Andrew Kelly, Can. Fish & Cold Storage, Ltd.	26,000
"	27th—Chief Zibassa, do.	57,000
"	28th—Carlotta G. Cox, Atlin Fisheries, Ltd.	70,000
"	30th—Borealis, do.	50,000
"	30th—Zorra, do.	20,000
"	30th—Grier Starratt, Can. Fish and Cold Stor., Ltd.	20,000
July	3rd—Chief Skugaid, do.	46,000
"	5th—James Carruthers, do.	90,000
"	8th—Chief Zibassa, do.	60,000
"	9th—G. E. Foster, do.	50,000
"	9th—Andrew Kelly, do.	40,000
"	11th—Zorra, Atlin Fisheries, Ltd.	12,000
"	18th—Chief Skugaid, Can. Fish & Cold Storage	40,000
"	18th—Zorra, Atlin Fisheries, Ltd.	10,000
"	24th—Chief Zibassa, Can. Fish and Cold Storage	30,000
"	25th—G. E. Foster, do.	100,000
		721,000

Totals for month April 27th to May 25th:

	Lbs.
Vancouver	1,031,000
Prince Rupert	721,000
Steveston	496,000
Prince Rupert (independent catches purchased by Atlin Fisheries, Lt., and shipped to Canadian Fish Co., approx.)	100,000
	2,348,000

Salmon.

At this time of the year, the word "salmon," means here the "sockeye" alone. This mysterious fish is responsible for the town of Steveston and the millions of dollars invested in canneries in that district. Steveston is never omitted by the tourist to this coast during the summer months. At night the lights on the water around the mouth of the Fraser River, is a sight once seen, never to be forgotten. Nets and boats have marking lights, that are the bane of coastwise steamers. It means going dead slow, and often stopping altogether. Meanwhile the passengers are treated to exchange of compliments between the officers of the ship and the men in the boats. These compliments often resolve themselves into profane and sarcastic comments on the abilites of those in charge of the said steamer.

Meanwhile the Cohoe is showing up, a few being brought in. This is somewhat early for this fish, so it may be only an odd fish here and there, enough to cause comment.

Whether the sockeye situation improves or not, the canners still have to be on the job each day. Every fish has to be taken advantage of, as the preparations and plans for the pack make the business one of the largest gambles on earth. The canners have almost millions invested in supplies to the fishermen, material for the factory, and trained men on salary all the time. Outside of this there is the heavy up-keep on the canneries to take into consideration.

The market is still well supplied with springs, which is our largest species on the coast. In turn will come the Cohoes, Humps, and Dog each in their own season.

At the present state of the market, all points to the different frozen fish being higher than last wniter. Packers do not seem inclined to quote ahead yet. They are all looking for advances, and want to be in on them.

Canned Salmon.

Sockeyes (talls)	$8.00 to	8.25
" (flats)		8.25
" (half flats)		10.25
Cohoes (talls)		4.50
" (half flats)		6.50
Pinks (talls)		3.25
" (half flats)		4.25
" (flats)		3.25

To date the run of sockeyes which as a rule holds sway at this season of the year, has been disappointing. Although fish have been scarce, it was expected that they would show up about the 27th, and at that make the pack about a month late. So far there has been no sign of a large body of fish in the Straits, and as the sockeye takes about ten days to reach the Fraser River after being sighted in the Straits, it looks as if the season will be very backward. Boats have been catching a very few, in fact not averaging any day above ten fish each. The canners are paying 35c per fish or almost double that of last season, and cannot get nearly enough. Our friends on the American side of Puget Sound have more facilities for getting the fish, being allowed to use trap nets against our gill nets. Boats supplying the canneries of Bellingham, Anacortes and Sound points, have been bringing in about fifteen hundred fish a day.

On the Northern Canneries, packers have been more successful, especially around the Naas and Skeena Rivers. Boats have hailed for a hundred fish some days. Even at this, the catch is not what was expected. Last year being a poor season on the Northern rivers, it was expected that the average would be made up this season. Even if the fish do come into the Fraser in the quantities required, the pack will be a small one compared with that of 1913.

Prices started off pretty stiff, and this short pack will only tend to stiffen them. It is also suggested that if the war in Europe materializes, prices are bound to go beyond the highest known in history.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by London Fish Co.)

Smoked Fish.

Finnan Haddies, Atlantic 15s and 30s	per lb.	.09
Fillets, do.	per lb.	.10
Bloaters, do.	per lb.	.06
Bloaters, Local	per lb.	.06
Kippers, do.	per lb.	.06
Salmon	per lb.	.12 to .14
Halibut	per lb.	.11
Cod	per lb.	.09
Kippered Salmon	per lb.	.11
Kippered Halibut	per lb.	.12
Kippered Black Cod	per lb.	.12

Frozen Fish.

Halibut, Chickens and Mediums	per lb.	.06
Smelts, Local	uer lb.	.05
Cod	per lb.	.05
Soles	per lb.	.05
Flounders	per lb.	.03
Perch	per lb.	.08
Herring	per lb.	.04
Black Cod, Alaskan	per lb.	.08
Mackerel, Eastern Bloaters	per lb.	.12
Shad Roe	per pr.	.20
Whiting	per lb.	.03

Fresh Fish.

Salmon, Springs	per lb.	.09
Do. Bluebacks	per lb.	.06
Do. Sockeyes, dressed	per lb.	.09
Do. Cohoes, dressed	per lb.	.08½
Do. Cohoes, round	per lb.	.07
Halibut	per lb.	.05 to .06
Cod	per lb.	.03 to .05
Smelts	per lb.	.05
Herring	per lb.	.04
Soles	per lb.	.05
Whiting	per lb.	.06
Skate	per lb.	.03
Perch	per lb.	.08
Rock Cod	per lb.	.05
Red Cod	per lb.	.03
Sea Bass	per lb.	.08
Black Cod, Alaskan	per lb.	.08
Shad, Columbia River	per lb.	.08

Pickled Fish.

Black Cod, Alaskan	per lb.	.10
White Cod, Pacific	per lb.	.07
Mackerel, Eastern Extra	per bbl.	$25.00
Mackerel, Irish	per bbl.	18.50
Herring, Atlantic	per ½ bbl.	5.25
Herring, Holland Milkers	per kit	1.00
Herring, Holland Mixers	per kit	.90
Herring, Local	per lb.	.07

Prepared Fish.

Boneless Cod, Acadia 12-2s and 24-2s	per lb.	.14
Do., Acadia Strips	per lb.	.13½
Do., Acadia Tablets	per lb.	.14
Do., Pilot Bricks	per lb.	.08
Do., Nova Scotia Turkey	per lb.	.07¼
Do., Pacific	per lb.	.08½

Shell Fish.

Crabs, Boundary Bay	per doz.	$1.00 to 1.20
Shrimps	per lb.	.08 to .15
Prawns	per lb.	.20
Clams	per lb.	.02
Clams, Shelled	per gal.	1.25

Personal.

Vancouver draws many visitors in the summer, and amongst them we have Mr. F. T. James, of Toronto. When the July issue of the CANADIAN FISHERMAN appeared, it seemed fitting to have this gentleman the subject of "Who's Who" column. Mr. James is on the coast solely for pleasure and health. After a few days in Vancouver, and Victoria, he has left for Skagway, looking at the points of interest on the way. Mrs. James accompanies him, and to us all it was a welcome sight to seem them both out here.

Ottawa is represented in the person of Mr. J. J. Cowie the pickled fish expert of the Department. He is on the coast in connection with the new Pickled Fish Act, and at present is north with Mr. F. H. Cunningham, Chief Inspector of Fisheries.

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SEA MUSSELS AND DOGFISH AS FOOD

By IRVING A. FIELD, U.S. Fisheries Laboratory,
Woods Hole, Mass.

Of the two sources of human food, the possibilities of the land have been extensively studied while those of the ocean have been greatly neglected. Only a few observations are necessary to show how in ignorance and prejudice we have been overlooking and rejecting enormous quantities of valuable food material which are daily going to waste. With our rapidly increasing population the capacity of the soil to produce enough food is gradually approaching its limit. The resources of the sea, on the other hand, are practically unlimited. It is there our opportunities lie for meeting the increased demand for food which can be supplied at prices suitable to the laboring man's purse.

For the past three summers I have been employed by the Bureau of Fisheries to investigate the food value of certain hitherto unused marine animals. Of the forms studied I wish to speak to-day concerning the sea mussel and the smooth and the horned dogfishes.

A food substance to be considered a good marketable commodity must measure up well to four standards: It must be palatable, digestible, nutritious, and so abundant that it can be marketed at little cost.

To determine the palatability of the substances I was concerned with, the obvious method was for me to eat the substance and if no ills results followed persuade others to eat it, then average opinions in regard to it. The scientific staff of the Woods Hole Laboratory gave me first opinions in these tests. If they found the flavor good, I had the dish served on mess tables of the Marine Biological Laboratory at Woods Hole and to other persons interested enough to try it.

The second test, digestibility, involves several requirements—namely, the proportion of the substance that can be digested, the ease or rapidity with which it can be digested, and the manner in which the food is accepted by the stomach. Comparatively little is known concerning the relative rapidity of digestion of different foods within the body. Most of the current statements on the subject are apparently based on experiments made outside of the body by artificial methods, imitating as closely as possible the conditions in the body, but not at all certain to be exactly the same. The artificial process takes much longer than the natural, yet proportionally the results are similar. For example, under natural conditions soft-boiled eggs will digest more quickly than hard-bolied ones. By the artificial method the process takes twice the time for each, but about the same proportionate results are obtained.

The third requisite, nutritive value, involves such questions as the ratio of edible portion to refuse, together with the chemical composition. A good food must supply for the least money a proper amount of nutrients to build and repair tissue and furnish energy for the body.

In the fourth place, the food must be so abundant and easily obtained that it can be sold reasonably cheap.

Any hitherto unused substance that measures up well to these standards ought to find its way into our regular bill of fare.

The Common Sea Mussel.

Now the common sea mussel, Mytilus edulis, is one of our most common shellfish, in size varying from 2 to 4 inches long by about 1½ inches in diameter. The shell is very thin, of a violet color, and covered with an epidermis of shining blue-black. Mussels grow in great beds along both our Atlantic and Pacific coasts, and on the coasts of Europe and Asia.

Very little use is made of the mussel in this country, it being utilized only as bait to some extent and on Long Island for fertilizer. In Europe it entirely replaces as a food the common clam, which, though abundant, is used neither for bait nor food. Why the mussel is so neglectd in America Ganong lays to the fact that the Indians superstitiously avoided it, while they ate the clam, thus leading the early white settlers to do the same thing, a habit that has been continued to this day. Only in and about New York do we find a call for mussels as food, and this is limited .

From this standpoint of palatability I have unanimous testimony from scores of persons who have eaten mussels prepared in various ways—pickled, steamed, roasted, and fried. All acknowledged that in flavor they are superior to clams and quite equal to the oyster. I have unsought testimony from a lady who, with her daughter, spent a season on the Rhode Island coast and there learned to eat the mussel. She says:

Two years ago we boarded a little while at Matunuck, R.I., 3 miles west from Point Judith There are large mussel beds there, and we were told that they were particularly nourishing for people of weak digestion. My daughter was very fond of them. We boiled them like clams or roasted them on hot stones and found them most delicious, particularly when roasted. We ate quarts every day and have longed for them ever since. My daughter gained strength while there, and it was the only time that she seemed to gain during the summer.

Sea Mussels and Dogfish as Food.

From the standpoint of digestibility the mussels take high rank. Persons with weak stomachs can eat them without suffering any inconvenience. They can be eaten before going to bed and cause no discomfort. One of the men at the Woods Hole Laboratory who became very fond of them expressed his opinion that the pickled variety was just the thing to eat before retiring. Another man says that while meat does not ordinarily agree with him he can partake freely of mussels and feel perfectly well. Personal experience on the part of many testifies that the mussel is more digestible than either the oyster or the clam. The reason for this, I believe, is in the character and properties of the flesh, which by cooking is made tender and mealy, whereas in the oyster and clam it becomes very tough.

The rate of digestion and amount of nutriment absorbed from the mussel by the human system have not yet been determined. The nutritive value from a chemical standpoint is much higher than that of the oyster and about the same as that of the clam. In ratio of edible portion to refuse, the mussel compares just as favorably with the oyster and clam. With its light

shell it has little waste, whereas the oyster with its thick, heavy shell has a high percentage of useless parts. From equal quantities of mussels and oysters by weight the mussels will yield between two and three times as much meat.

From the standpoint of economy, mussels rank equally high. They are widely distributed and extremely abundant, being found in the bays and estuaries of our eastern coast from North Carolina northward and on our Pacific coast from Alaska to San Francisco. They grow in great beds, often acres in extent, on the surface of mud or sand at low-tide mark. They also grow in the deeper water, where they may be dredged up by the ton. I am informed that there are places in Narragansett Bay where a man could easily obtain 50 bushels a day throughout the whole season from May to November, if he had a partner to take and dispose of the catch, and it is considered that 35 cents a bushel would be a reasonable price to ask for them under these circumstances. The mussels breed at a prolific rate, the method of reproduction being similar to that of the oyster, so that it is an easy matter to cultivate them by artificial means.

In Europe the demand for mussels as food and bait is so great that mussel culture is practised on a large scale. Two methods of cultivation are followed, one of which may be termed the "buchot" system or French method, and the other the bed system or British method. The French method of cultivation dates back to the year 1035. It was invented by an Irishman named Walton, who was the sole survivor from a shipwreck in the Bay of Aiguillon near the village of Esnandes. He was kindly receivel by the French fishermen, who, up to that time, had been able to make a very scanty living from the sea. In a short time he was able by his ingenuity to give them a lasting reward by establishing the buchot method of mussel culture, which has continued to this day and at the present time gives support to several thousand inhabitants of that region. In 1905 the village of Esnandes alone marketed 215,253 bushels of mussels, valued at $112.433. The total number of mussels cultivated on the French coast in 1905 is estimated at 425,492 bushels, valued at $222,439.

Walton's buchots, or wooden inclosures, for the rearing of mussels were made V-shaped, with the apex pointing out to the sea, the purpose of the arrangement being to protect the structure from the destructive action of the winds, waves, and ice. At the present time a buchot is made up of a row of stakes placed about 2 feet apart and interlaced with a mesh work of flexible willow or chestnut branches some 12 to 18 feet long and 2 inches in diameter at the larger end. The stakes are trunks of trees varying from 6 inches to 1 foot in diameter and 12 to 15 feet in length, and are driven into the ground for about one-half their length. The length of a buchot at any particular place varies with the character of the bottom and the tides. In the Bay of Aiguillon they are 250 yards long and placed about 30 yards apart, running at right angles to the shore. The buchots are arranged in two divisions, one for collecting the spat, the other for the growth and fattening of the mussels. The two divisions may be composed of as many as five buchots, extending from between tide marks out into deep water. The structures out in the deep water may as much as 3 miles from high water mark and are exposed only at the lowest tides. They are composed merely of solitary stakes placed about1 foot apart, which serve for collecting the spat and forming a most advantageous position for its early growth.

When about 5 months old the seed mussels are scraped off the piles and transferred to the next buchot nearer the shore, where they are fastened in parcels by means of old netting. By the time the netting has rotted away the mussels are firmly attached to the timbers by their byssal threads. When they have grown so large as to be crowded on the wicker work they are thinned out by removing the larger ones to the next higher buchots, and so on from one section to the other, each time transferring the mussels to the buchots nearer the shore. The mussels are attached by the same operation already described, but are not wrapped so carefully, since their size is such as to enable them to be more securely fastened without help of the netting. The work of transferring mussels goes on day and night whenever low tide permits.

After about one year's treatment upon these structures the mussels attain marketable size, which is between 1¾ and 2 inches in length. Before ready to be offered for sale, those that have reached the desired size are transplanted to the highest row, where although left dry twice each day they thrive well and can be easily handled when desired for market. Having become inured to exposure upon these upper rows, these mussels consequently keep longer and fresher than those from the lower rows. The poorest cultivated mussels are considered better than the best mussels grown under natural conditions.

Sea Mussels and Dogfish as Food.

The British method of mussel culture, briefly, is to collect young mussels from various places and transfer them to beds in favorable localities, usually in estuaries, where the water is brackish and where they are exposed at low tide, both of which conditions are supposed to favor growth and fattening. It has been estimated that the average yearly yield of an acre of such mussel beds is 108 tons, worth at least $262, which is about ten times as much as the agriculturist expects from his farm.

To summarize the qualities of the mussel, we have a shellfish as palatable as the oyster, much more nutritious, and more digestible. It contains only half as much waste as the oyster, is more abundant, is more easily cultivated in taht it requires less special conditions for growth, and it is adapted for making a greater variety of food preparations. Furthermore, it is in season for the table when the oyster is out of season.

The Smooth and Horned Dogfishes.

The smooth and the horned dogfishes constitute another article of food that prejudice is keeping from our tables. Of these I will merely state the results of my investigations. The smooth dogfish is common on our eastern coast south of Cape Cod during the summer, and, as I have shown in a recent paper, is a most destructive enemy of the lobster. The horned dogfish during the summer months has its range north of Cape Cod, where it is exceedingly abundant, and during this season plays havoc with the herring, the mackerel, and other fishing operations. This species although it has a general resemblance to the smooth dogfish, is easily distinguished by the two horns, one lying in front of each dorsal fin. The habits, composition, and food properties of the two species are very different.

The smooth dogfish is a bottom feeder, preying almost entirely upon crabs, lobsters and other crustaceans. It does not run in schools, as does the horned dogfish, which goes in enormous numbers, preying upon the large schools of herring, mackerel, and upon fish caught on the trawler's line.

In composition the flesh of the smooth dogfish is free from oil, resembling most closely the cod. The horned dogfish, on the other hand, contains a large percentage of oil and in this respect most closely resembles the salmon.

From the standpoint of palatability I have good testimony that the fresh smooth dogfish is just as good as flounder, halibut, or any other of the standard food fishes. I have had the fish served several times in various ways at the mess of the Marine Biological Laboratory, at one of the private boarding houses in Woods Hole, Mass., and in a number of private homes. In all cases, whether or not the persons knew what they were eating, favorable comments were made as to the texture and flavor of the fish. Not one adverse criticism was heard. Concerning the flavor of freshly prepared horned dogfish I can not speak from personal experience, but there is abundant testimony that it is good. The Commissioners on Fisheries and Game of Massachusetts have personally reported its palatability, the lack odor or "strength," and the good consistency when cooked or canned. They say it closely resembles halibut. The horned dogfish has in recent years been exploited in England as a valuable cheap food. A writer in a London paper states that the Plymouth council engaged an expert cook to prepare dogfish for the table with and without sauce, and that the published opinions of those who partook were excellent as to the color, flavor, and firmness of the food. Both species are nutritious and boneless and are therefore a safe food for both the young and the aged.

The dogfishes are not only palatable in the fresh condition, but are as good as many other fishes when preserved by the standard methods. The horned dogfish being in composition most like the salmon is best adapted for canning and is considered as good as the medium grades of salmon. A packer in Petit de Grat, Cape Breton, in 1904 sent me a dozen cans of dogfish he had packed. I passed them around to my friends, who prepared the contents in different ways (fried, scalloped, creamed, etc.) In these forms the canned article was highly praised for flavor and palatability. Samples were also sent to several hotels, where the fish was served to the guests as "Japanese halibut," and was pronounced most acceptable. An establishment at Halifax has been canning large quantities and putting them on the market labelled "ocean whitefish." A firm at Charlottetown. Prince Edward Island, has been successful in selling the canned article as "sea bass."

The smooth dogfish found south of Cape Cod is preserved best by salting and drying according to the same method employed for preparing dry salt cod. The product very much resembles cod, but has the advantage of being boneless. I have had creamed salt dogfish served in the mess hall of the Marine Biological Laboratory to a score or more of persons. They all reported that they could detect little or no difference between it and the ordinary salt codfish.

The flesh of the dogfish is apparently just as digestible as that of other fishes, is palatable, nutritious, and easily preserved. The fish are so abundant and easily obtained that they are ridiculously cheap. But prejudice is barring this wholesome food from our menus. People seem more willing to starve than to eat this fish, just because it bears the name "dog." The problem now is how to put the fish on the market without and offensive label and at the same time meet the spirit and letter of our pure-food law.

The packing of both mussels and dogfish ought to become a large industry. Conditions are good for creating a market for them. They are a cheap, wholesome food for the masses and constitute a field of opportunity for the fisherman, the packer, and the merchant.

CANADIAN FISHERIES PROTECTION CRUISER "VIGILANT," EMPLOYED UPON THE GREAT LAKES.

PISCATORIAL PARAGRAPHS.

"Charley" Earle, the popular salesman of the Maritime Fish Corporation, is kept pretty busy these days singing the "British Navy" and other patriotic songs. Charley is an optimist in the fish business, and does not consider that German sausage will beat Finnan Haddie.

When at the Exhibition keep a good look-out for James' lighthouses. Lighthouses as a rule are meant to steer clear of, but the genial F.T.'s "Beacons" are intended to lead one in the right direction.

Mr. Andrew Halkett, naturalist of the Marine and Fisheries Department, will be on deck at the Government Exhibit. What the learned professor does not know about fish is not worth knowing, but they say that the Wigle Fish found at last year's exhibition has completely floored him and has up to date eluded scientific classification.

Mr. Fred. J. Hayward, who represented British Columbia at the last Fisheries Exhibitfi will not come east this year. Fred's journey eastward last season was momentous with such incidents as train wrecks, hurricanes, cloud bursts and hold-ups. He's a married man now, and is taking no chances.

We are sorroy Mr. A. L. Hager of the Canada Fishing Co. will be unable to come east for the Exhibition.

We would like to see some of our fish friends from Winnipeg and other centres at the Exhibition. They would be proud of their business.

A. H. Brittain, managing director of the Maritime Fish Company, while a busy man will be on deck. Last year he did a lot to make the exhibit a success. If you want to talk fish just mention the word.

TO INVESTIGATE NORTHERN FISHERIES.

Commissioned by the fisheries department of the federal government of Canada to ascertain the actual commercial value of sturgeon and other fish in the waters off the east coasts of Hudson and James Bays, C. D. Melville of Edmonton started from Cochrane, Ont., early in June on a journey of six months. The trip includes 1,500 miles of canoe-paddling.

Officials of the department of fisheries have received reports that Hudson and James Bays abound with sturgeon, and it is now decided to make a thorough investigation of these waters, also the rivers in the districts to be visited. A second expedition has gone to investigate the fishing possibilities in the strats of Hudson Bay, confining its operations to the deep sea.

HOW HE WEIGHED IT.

Farmer Hiram sold butter to the village grocer and took sugar in exchange. It seemed to Farmer Hiram, after a while, that the sugar he was getting was short weight. So he went over to the grocery shop to make a complaint.

"Look here, Mr. Jones," he said, "it seems to me you're giving me short weight sugar."

"No," said Jones, in a dry voice; "no, that can't be, for in measuring out that sugar of yours, I always use a pound of your butter as a weight!"

SOME DAILY EPIGRAMS.

Electric signs let out some brilliant remarks.

A mean man always measures the world by his own standard.

But a crank ceases to be a crank when he does you a good turn.

A woman seldom nags her husband unless he is that kind of husband.

They say that happiness is a habit. Well, here's hoping you'll get the habit!

Indifference is the one thing capable of freezing the milk of human kindness.

The high cost of living still enables home to pose as the dearest place on earth.

Some men wait for things to turn up, and some others turn them up while they wait.

The average man accepts advice with about as much grace as a tramp accepts a bar of soap.

It's a pity we can't put some of our youthful enthusiasm in cold storage and keep it for old age.

But there is always this hope for a molly coddle good boy—he is apt to run across some tough kid who will take it out of him.

Some people mistake notoriety for fame.

There is a saving clause in every miser's creed.

It's sometimes easier to bear it than it is to grin.

Generating hot air is easier than getting up steam.

Some men are nothing more than animated threats.

Weather strips are now classified as long felt wants.

Many a man punctures his tire on the road to wealth.

It is better to be on pleasure bent than on duty broke.

The art of pretending is not confined to regular actors.

The more people give the easier it is to forgive them.

A vivid imagination is as dangerous as a little learning.

Those who pay as they go usually find the going good.

Any man under a cloud naturally appears in a bad light.

Don't worry unless you can draw a salary for so doing.

A bilious man should rather enjoy being handed a lemon.

It's sometimes easier to discharge an obligation than a cook.

If we sing our own praise we must provide our own encore.

The income tax will no doubt produce a big crop of strange bedfellows.

Why owe any one a grudge when we can pay as we go?

Never pass up your friends in order to gratify strangers.

The silent watches of the night—those we forget to wind.

Occasionally it is cheaper to move than to try to live it down.

It is better to be good for revenue only than to be bad for fun.

Most fire escapes are patterned after the straight and narrow way.

SAFETY FIRST

BEACON BRAND

DO NOT TAKE CHANCES!
DEAL WITH THE BIG HOUSE

The F. T. JAMES Co. Limited

TORONTO

FISH-FOOD SPECIALISTS

We handle Fish of all kinds, and nothing but Fish. Write us.

Eat fish! This cry to the public, eager to reduce the present high cost of living, is being taken up in all parts of the country by the daily newspapers, which at last realize that in fish there is the solution of the living problem now confronting the poor man and his family. Not only are the newspapers saying eat fish, but readers—the intelligent ones in the big cities — are writing letters to the editors of their favorite papers, preaching the same gospel—eat fish. D. M. E. Pennington, of the United States Food Research Laboratory was at the new fish pier in Boston last week, and told the commission men and dealers to advocate fish eating, and so the good work goes on. The longer the cry eat fish continues, and the louder it becomes, the greater will be the consumption of fish. With the low prices prevailing on all varieties of fish at the present time, there is no reason why the consumption should not be double what it now is. Only recently there were fifteen varieties of salt water fish selling at five cents or less per pound, wholesale. Sea bass could be had at a cent a pound, market cod, a cent and a half, croakers a cent a pound; haddock, two cents; pollock, a cent and a half; weakfish, at three cents, and bluefish at five and half cents. What is needed now is not more fish, but a greater demand.—Fishing.

A new life-saving station is to be built and a high-power lifeboat is to be added to the equipment of the Point Pelee life-saving station at Lake Erie.

We may discover a fault in a friend in ten seconds that we probably couldn't discover in ourselves in ten years.

Engine Bargains

6 H.P. Gray marine, $75; 4 cycle 7 H.P., 2 cylinder $125; 2 H.P. at $35; 3 H.P. at $40; 3 cylinder, 4 cycle, $150; 2 1-2 stationary $90.00; 8 H.P. stationary, $175; 12 H.P. stationary, $225; 18 H.P. stationary; 25 H.P. stationary. Send for list, also catalogue of new ones.

GUARANTEE MOTOR CO.
HAMILTON - CANADA

According to the Richmond Record, the Madame Island fishermen last week were compelled to throw overboard hundreds of barrels of herring owing to there being no salt to pickle them.

Jones (in fashionable restaurant)—"Don't order anything for me. I'm not hungry."

Smith—"But you will be by the time the waiter brings it."

Unless a man possesses self-control he is little better than a slave.

Many a man would gladly take the bull by the horns—if the bull would stand for it.

It's hard to convince a man that he ought to work when he doesn't have to.

FISHING SUPPLIES

Nowhere outside of the City of Halifax can a better line of Fishing Supplies be found than we carry in stock. Some of our Specialties are :—

Trawl Kegs, Cotton Lines, Arthur James Fish Hooks, American Standard Nets, Plymouth Manilla Rope, Caller Herrin, Cutch, Miller's Extract Hemlock, Cape Ann Fishing Anchors, Fish Barrels, Bulk Salt, Bag Salt, Dories, etc., etc.

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Ask for our Niobe Brand of Haddies, Kippers and Bloaters, and Sardines in the purest of Olive Oil. Also our Ivory Brand of Pure Boneless Codfish in 2″ blocks, 20lb. boxes

Everywhere in Canada

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Exceptional Angling Opportunities

are offered by the Province of Quebec, which is the only one that leases exclusive hunting and fishing territories over large areas of forest, lakes and rivers, both to Clubs and private individuals, with the privilege of erecting camps thereon.

Membership may be obtained, if desired, in many existing clubs, with camp privileges already provided, and often with the right of erecting private summer homes on suitable sites on the club territory.

On all unleased Crown Lands and Waters, angling and hunting are absolutely free to residents of the Province, and the only charge to non-residents is the cost of the non-resident fishing or hunting license

To The Wholesale Fish Trade

The attention of dealers who receive their fresh fish from Portland and other foreign sources is directed to the exceptional opportunities of obtaining their supply from the Baie des Chaleurs and the North Shore of the St. Lawrence, to their own advantage and that of their customers, and to the benefit of the fishermen of the Province of Quebec.

For all Information apply to--

THE MINISTER OF COLONIZATION,
MINES AND FISHERIES OF THE PROVINCE OF QUEBEC

SOFTNESS

Do you know that the general method of making oiled clothing soft takes away part of the waterproof qualities?

We can supply you with durable oiled clothing as soft as a kid glove. Manufactured by a process which enables us to guarantee every garment absolutely waterproof.

* * *

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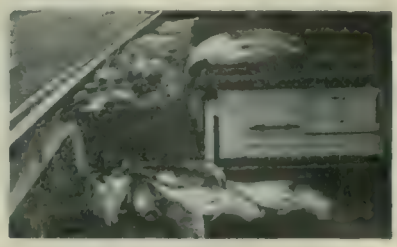

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 912 DOMINION BUILDING.

Published on the 24th day of each month. Changes of advertisements should be in the publisher's hands ten days before that date. Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

ADVERTISING RATES ON APPLICATION

SUBSCRIPTION: Canada, Great Britain and United States, $1.00; Elsewhere, $1.50, payable in advance.

Vol. I. MONTREAL, SEPT.—OCT., 1914 Nos. 9-10

The Fish Eating Campaign

The CANADIAN FISHERMAN would strongly urge all the wholesalers handling Canadian fish to begin a campaign advertising the extensive use of fish as a food this coming winter. Conditions are right for introducing fish as a cheap and palatable food for those who wish to keep down living expenses during these strenuous times.

Undoubtedly, the best publicity is from the reading columns of the daily newspapers, but, even when the matter is supplied to them, editors are prone to regard articles on fish as being unimportant and they are consigned to the waste paper basket. As our fraternal journal, the Fishing Gazette, says editorially:

"Wholesale fish dealers cannot afford to advertise their cheap fish, and still the public-spirited publishers, who claim to be serving the people, who print all the news that's paid for, won't print anything about free fish or cheap fish because it's not news, for it has not been paid for. When it is too high the newspapers do it all right, but when it comes to telling the poor how to reduce the cost of living, say—by eating fish instead of meat—the newspapers won't do it because they are not being paid to advertise fish."

The CANADIAN FISHERMAN is willing to assist the fishing industry in a publicity campaign to promote the eating of more fish and less meat. We have several good ideas along this line and are at present developing some of them, but we would be glad to hear from members of the trade on the subject. Suggestions will be carefully considered and a plan evolved whereby we can start the ball rolling. United effort can accomplish much and if we can get the trade together and work along some well defined plan there is not the least doubt but what we can boost the eating of more fish in Canada. By doing so, the whole industry will benefit, fishermen and distributors, and the general public will also share.

The CANADIAN FISHERMAN has no love for the Kaiser, but we will give him credit for boosting the fish business of Germany. With his untiring energy he popularized fish as a food, subsidized the German fisheries, and brought the fishing industry of his country to a very high standard.

Germany's Fish Trade with South America

In the export fish trade to South America, Canadian exporters have a chance to capture Germany's activities in that particular line. Taking the Argentine Republic, we find that Germany exported the following fish foods there during the year ended December 31, 1912:

Codfish valued at 86,564 pesos.
Preserved fish valued at 4,809 pesos.
Sardines valued at 27,070 pesos.
Other fish valued at 32,080 pesos.

(The Argentine peso is equal to 96½ cents).

During the same period Canada exported preserved fish to the value of 23,668 pesos to Argentina, which, when compared with Germany's total value of 150,523 pesos, looks as if there is a good market in the Argentina for Canadian fish.

In the fish trade of Brazil, Germany exported cod to the value of 88,226 paper milreis and preserved

and extracts of fish to the value of 95,156 paper milreis. Canada leads Germany in this trade by our export of cod valued at 2,813,420 paper milreis but in fish extracts and preserved fish we fall behind with 89,634 milreis value. Canada can make a bid for Germany's fish trade with Brazil.—(Note: Paper milreis is equal to 33½ cents.)

Germany's Glue Trade with Canada

The British Board of Trade and the Department of Trade and Commerce of Canada are now engaged in waging a war against Austria and Germany. The export trade of the two countries is at a standstill and Great Britain and her Colonies are out to capture all they can get of it.

In so far as the fisheries are concerned, Germany and Austria exported but very little to Canada, but it is interesting to note that we imported glue, glue stock, mucilage, powdered and sheet glue to the value of $38,380 during the year ending March 31st, 1914. Now that this source of supply is stopped what is to prevent us from supplying ourselves with fish glues manufactured right here in Canada? Fish glue of Canadian manufacture could be used to offset what we imported from Germany and an important industry would be encouraged.

War and British Fishermen

The dastardly work of sowing contact mines in the waters of the North Sea by the Germans has resulted in a number of disasters to British fishing vessels, and practically stopped all fishing operations in those waters. The survivors of the many steam trawlers and herring drifters blown up relate terrible stories of the havoc wrought by these unseen dangers. Vessels steaming for port or fishing grounds have been torn asunder without warning and their surviving crews left clinging to floating wreckage.

Instances of the terrific power of these mines can be imagined when the whole forward part of a steam trawler was blown off as soon as her stem struck. Another vessel struck a mine amidships and was instantly torn in half; another had her port side ripped out, while yet another had the trawl gear which she was towing shivered to shreds of wood and rope.

The work of clearing the seas of mines has largely been undertaken by the fishermen of the steam trawlers working under Admiralty orders. The area in which mines are presumed to be located is swept by means of a long wire hawser towed astern between two trawlers. The anchor ropes of the mines are exploded by rifle fire. Floating mines not attached to anchors cannot be caught in this manner and there are no means of avoiding them except by keeping a good look-out in daylight. As they are often painted in colours resembling the water they are exceedingly hard to detect and it is from mines of this nature that most of the trawlers reported missing in the North Sea are supposed to have foundered.

Many of the German mines were distributed from German steam trawlers flying the Dutch, Norwegian Swedish and Danish flags. As fishing craft, these vessels passed out through the British fleets without being held up. One of them was later discovered scattering their destructive machines off the British coast with the result that all fishing vessels are being overhauled and searched.

We in Canada have much to be thankful for that our fishing grounds are free from such a danger and that our fishermen are free to prosecute their business without fear from the hostile acts of the enemy. With the British Navy in command of the High Seas, the fishing industry of Canada may well voice their thanks to the gallant fellows keeping guard over the enemy in the waters of the world.

Canada's Gifts to Creat Britain

Besides providing a contingent of fighting men and naval vessels, Canada has come to the aid of the Mother Country with splendid gifts of flour, coal, oats, potatoes and last but not least, fish. The latter gift consists of canned salmon from the Province of British Columbia.

Nova Scotia's gift consisted of coal and while we do not criticise this generous offer for a moment, yet it seems to us that Nova Scotia would have been better represented with a gift of dried, preserved and salted fish. A gift of this nature would have encouraged the fishing industry more than the coal gift would help the coal trade in Canada, and the distribution of Nova Scotian fish in Great Britain would undoubtedly aid in establishing a market some time in the future.

Probably a gift of fish may be given at a latter date. Coupled with New Brunswick's present of potatoes, the poor of England will always have a warm spot for the Maritime Provinces of Canada if Nova Scotia provides the other essential to the staple British dinner of fish and potatoes.

Special Notice

The Special Exhibition Number of the CANADIAN FISHERMAN having been published later than usual in order to appear during Exhibition time, we find it necessary to adjust our publication dates and the present number is published on the 24th of this month as a combined September-October issue. The November issue will be published on the 24th of October.

Editorial Notes

Canadian herring is a fish food that would stand a lot of boosting. The catch appears to be plentiful this Fall and it would be hard to procure a more palatable food. With the new regulations regarding the pickling and packing of herring in force, a splendid business is open to enterprising firms. They have got to be put up right, however. The public is particular nowadays and ill-coopered barrels, cheap packages, and stale, rusty fish will never sell and slackness of this nature kills the trade and the demand.

* * * *

The CANADIAN FISHERMAN compliments the Fisheries Department for the splendid little book "Fish, and how to cook it," published by the Department this fall. Nicely printed and handsomely gotten up, this little volume will do much to assist in developing a demand for our fish if it can be distributed to the right people. It will pay you to write the Department of Naval Service for a copy.

* * * *

We would suggest that more fish be included in the diet of prisoners in Canadian penitentiaries. Fish should be served at least three times a week.

* * * *

The Militia Department might also take the hint and supply a liberal diet of Canadian fish to the many thousands of our soldiers in concentration camps. It all helps the trade and assists in building up an important industry. The fishermen have to suffer through the war and it is only fair that they be given encouragement. The food supplies and fitting out bills on the Bank vessels are liable to be high and as the fishermen have to pay, it is up to the Government officials in various supply departments to purchase more fish and help them out.

* * * *

With the Fall fishing season commencing, we would call the attention of vessel owners and masters to the safety regulation which calls for a supply of food and a full water jar in every dory which goes over the side of a vessel on the grounds. Safety First is the watchword nowadays.

* * * *

Mr. Geo. W. Wilson, Secretary of the Skeena River Fisheries, Ltd., called at the office of the CANADIAN FISHERMAN recently. Mr. Wilson, like all British Columbians, has an unbounded faith in the future of the Coast Fisheries. Mr. Wilson is returning by way of Boston and Chicago.

* * * *

The Digby Schooner Lila G. Boutilier, Captain Arthur Casey, arrived in Digby on September 21st, with 100,000 lbs. of fresh fish. This is the vessel's first trip under the Canadian flag, and it is to be hoped that she will continue to make good stocks.

The German Fishing Industry

How The War Affects It.

Writing in the "Fish Trade Gazette," Quibbon says:—In England the influence of the war on the fisheries is by no means good, particularly in regard to the herring fishing, but we may congratulate ourselves when we contrast our position with that of Germany. Here we are able to have the greater part of our trawling fleet which is now ocupied in mine-sweeping engaged in its peaceful pursuit of catching fish, and all the markets of the world are open for such products as we care to export, save the markets belonging to the enemy. Not a single German vessel can shoot a net or trawl in the North Sea, or anywhere except in the German Bight and along the strips of coast commanded by shore artillery or mines, or in the Baltic. It is a curious fact that the Baltic should have become to all intents and purposes a German sea, by virtue of the German Navy moored in the Kiel Canal or lying in the lee of Heligoland, since the existance of the canal enables it to pass rapidly from one sea to the other.

The Baltic Fisheries.

The German Baltic coast is extensive, stretching from Denmark, on the west to Russia on the east, and the fisheries are varied, and, although not to be compared with those in the North Sea, they are of some importance. About 19,000 fishermen with 11,-500 boats are engaged and the value of the catch last year was $25,000,000. The boats are mostly small, and many of the fishermen are only occasionally employed in fishing. Lately, however, many boats of a better type have been introduced and about 300 of them are provided with motor engines. Owing to thet low salinity of the water compared with that of the North Sea, the predominating fishes are not the same as in the latter. The haddock is absent, and indeed pratically all the members of the cod family except the cod itself, which is taken along the whole coast with lines, seines, set nets and traps. The most important fishes are the ell, flounder, plaice, sprat, herring (the small Baltic variety), pike, perch, bream, tench, roach. The "smoking" industry flourishes along the Baltic coast, there being about 450 smoking establishments, chiefly for sprats, but eels, herrings, flounders, plaice, mackerel, salmon and sturgeon are also prepared in the same way. The Kiel sprats are famous throughout the Fatherland. The total weight of the fish taken from the Baltic by the Germans is about 700,000 cwts annually.

FISHERIES STATISTICS, JULY, 1914.

The total value of the sea fisheries, to the fishermen during the month of July was $2,939,495, or an increase of $391,098 over the same month last year.

The lobster catch was not so large as during the same period last season, but there was an increase in the quantity of salmon, cod, haddock and herring taken, for which, as a rule, better prices were obtained.

A good run of salmon was reported from British Columbia, but owing to unfavorable weather conditions, fishing operations were somewhat hampered.

Since the opening of the lobster season in November last, till the end of July, there were 147,702 vases canned, and 78,597 cwts. shipped fresh. During the corresponding period in the preceding year 149,794 cases were canned and 93,536 cwts. shipped in shell or used fresh.

THE FISHERIES EXHIBIT CANADIAN NATIONAL EXHIBITION

A description of the Finest Fish Exhibit Ever Shown to the Canadian Public.

The Canadian National Exhibition held at Toronto offered many attractions to the visitor, but we venture to state that none of them exceeded in interest the remarkably well arranged exhibit of Canadian fish and fish products staged in the Dominion Government Building.

As those in the trade are well aware, fish is an unusually hard proposition to make an attractive show out of. The very finest specimens of fish are liable to appear flabby and stale looking after a long journey from sea and lake to the Exhibition and the warm weather prevailing during the display play havoc with perishable exhibits. However, in spite of the drawbacks, the Fisheries display was striking and attractive and the fish on view looked as fresh and as tempting as if they had but recently come out of the water.

To keep the show in A.1 order and condition and to avoid any smell likely to prejudice the public, the various exhibitors had their work cut out for them. Fresh fish were received daily and stale fish immediately replaced and removed. This necessitated many re-arrangements of the stalls and the gentlemen in charge of the several stands certainly deserve credit for their work in keeping things up to the mark of attractiveness.

The Exhibition lasted for two weeks, from August 29th to September 12th and in the course of that time fully a million persons visited the fish display. As an advertising medium, the Fisheries Exhibit will undoubtedly bring good results, not only to the exhibitors, but to the whole fishing industry of Canada.

The display was held under the auspices of the Dominion Government Marine and Fisheries Department, and the distribution of a little book entitled "Fish, and how to cook it" to the public assisted the prime object of the Exhibit, namely, to show the people of the inland provinces the value and variety of fish as a cheap and palatable food.

Marine and Fisheries Exhibit.

This stall was in charge of Mr. Andrew A. Halkett, Naturalist to the Department of Marine and Fisheries, and consisted of stuffed and mounted specimens of Canada's fishes—fresh and salt water. From tiny sun fish to lordly halibut they ranged and each of the many specimens were ticketed with a card giving name, locality found, size, weight, and all particulars regarding the fish. The natural colors of every fish were carefully reproduced on the stuffed specimen and as an object of natural history the display received unusual attention. Mr. Halkett was also in charge of the

Exhibit of Maritime Fish Corporation, Ltd.

British Columbia Fisheries Exhibit.

which consisted of canned salmon, halibut, herring and other Pacific fish products in addition to salmon, smoked and kippered. British Columbia's exhibit was not as extensive as it might have been, but the distance from the coast to Toronto militated against the sending of anything other than canned and preserved fish products.

Maritime Fish Corporation, Ltd.

Nova Scotia and the Atlantic fisheries were ably represented in the fine show of the Maritime Fish Corporation, Ltd., of Canso, Digby and Montreal. This exhibit was in charge of Mr. A. H. Brittain, Managing Director of the Company, assisted by Mr. C. H.

Earle and Mr. H. Welham. Tastefully decorated with flags, palms and pictures, the main stand of this company presented a fine appearance and a remarkable range of fish products was shown in canned haddock, halibut, herring, codfish and various brands of dried and shredded fish. An attractive feature of the display was the model of the 90-ton fishing schooner "Dorothy M. Smart" owned by the Company and operated out of their Digby branch. The model is 39 inches over all and is complete in every particular—the spars being made of Oregon pine with all blocks and iron work of aluminum. Ten miniature double trawl dories were nested on her decks and sails consisting of mainsail, foresail, jumbo, jib, balloon, staysail and fore and main gaff-topsails were set on the masts. The rigging, sidelights, jigs, halliards and sheets were all fitted and rove off on the model exactly as they are on the original schooner. This beautiful piece of work was made down in Shelburne, N.S., by Mr. Colin C. King, Mr. T. H. White and Miss King, and is a marvel of Nova Scotian handicraft.

The F. T. James Company's Exhibit.

was largely representative of the lake fisheries and it would be hard to decide which was the most interesting between them and the Maritime Company. The display was in charge of Mr. F. T. James, President of the Company, assisted by Mr. Coutts and others.

The stall had, as outstanding decorative features, two miniature lighthouses at each corner equipped with the regulation occulating flash lights. These were a striking embodiment of the Company's "Beacon" trade mark and showed great originality in stall designing.

The display consisted of strictly fresh fish changed daily, and kept in condition by powdered ice, water sprays and electric fans. The specimens shown were largely fresh water fish—pike, pickerel, trout, sturgeon, bass, whitefish, perch, dore, etc., with British Columbia and Gaspe salmon and a few species of salt water fish. A large Florida turtle, a model pound net in a tank, and a clever arrangement of statuette boys fishing with miniature rods in a glass aquarium filled

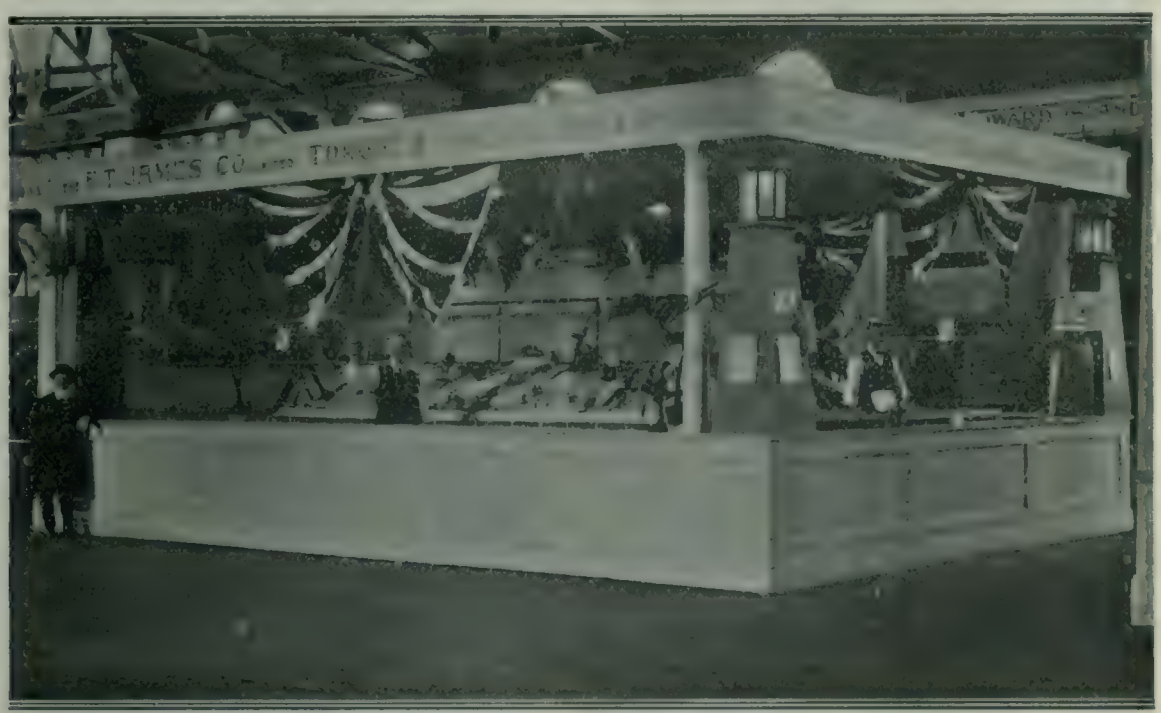

Exhibit of F. T. James Co. Toronto.

Other interesting features in the exhibit consisted of a number of swordfish heads and illuminated lifebuoys representing the Company's trade mark, also various specimens of fish by-products in oils, fertilizers and glues.

In the Cold Storage section of the Fisheries Exhibit, the Maritime Company had a fine showing of fresh and frozen sea fish of every kind caught in the Atlantic and of value as food. This included swordfish, halibut, salmon, shad, gaspereaux, Canadian soles and flounders, skate and squid. In the Cold Storage showcase samples of finnan haddies and various smoked and cured fish were shown in addition to clams, mussels, whelks, lobsters, crabs and other shellfish. For an exhibit of sea food, the Maritime Company certainly put up a show which was well worth visiting and which will assist not only themselves, but the whole fishing industry of Canada by the publicity which they have given Canadian fish to the consumers of inland Canada.

with turtles and live fish constituted an ingenious attraction to sightseers. The decorative features of pound and gill nets were supplied by the John Leckie Company of Toronto.

The Cold Storage Chamber and Showcase.

One of the interesting features in connection with the recent Fish Exhibit at the Exhibition, was the method in which the frozen fish and fresh fish was kept in condition. From the photographs you will notice that the fish was displayed in two rooms and the showcase, in the former, frozen fish was shown, and the latter, fresh fish. The temperature at which the frozen fish was held, was in the neighborhood of 15 degs. and the fresh fish about 34 degs. The rooms were built of pure corkboard, the windows being four thicknesses of plate glass—the construction of the showcase being absolutely identical, excepting that the top was divided off into a lift-up portion, so as to give the ready

access to the handling of the fish. The fish in the showcase were laid on tiled trays.

The temperatures were maintained by means of mechanical refrigeration on the ammonia system. In the rooms, the pipes were placed on the ceiling and the walls, in the showcase, in the centre.

The outfit consisted of a vertical twin enclosed type Compressor, which was driven by means of an electric motor, belted to flywheel. The compressor operates at a speed of 150 R.P.M's, and compresses the ammonia gas into a double pipe condenser. This condenser consists of a series of pipes connected at the ends to headers, the ammonia passing between the outer and inner tube, and through the inner tube water is circulated counter-currently. By this means the gas is cooled down into a liquid form, and passes on to the liquid receiver, and from there to the regulating valve. At the regulating valve, the liquid ammonia is expanded, which causes the ammonia to be lowered in temperature. This liquid passes through the coils in the rooms, is slowly evaporated, and then drawn back to the compressor—this process being continuous.

In order to give the frozen fish a good appearance, after same had been arranged in the rooms, and the rooms lowered to the desired temperature; they were sprinkled with water, which naturally formed a thin coating of ice, giving an extremely good appearance to the whole fish display.

All who saw this exhibit were impressed with the great advantages which are to be obtained by the use of mechanical refrigeration in connection with fresh fish and frozen fish handling. The resulting feature, of being able to hold the fresh fish in perfect condition for a reasonable length of time must necessarily do away completely with the losses, which result when no means of keeping them fresh is at hand. Of course, most handlers at present carry fresh fish by means of ice, but this form has its limitations, as ice is very seriously affected by hot weather conditions, causing it to melt quicker, whereas cold, mechanically controlled, is a complete safeguard.

So far as frozen fish is concerned, the advantages of mechanical refrigeration are still further marked, as by this means the fish can be practically maintained at the temperature at which same has been handled at the wholesale houses. With ice it is impossible, excepting by the use of salt in conjunction with the ice, to obtain a lower temperature in the rooms or boxes, of about 36 to 40 degs. and this naturally depends upon the type of box, etc. With this high temperature, frozen fish, will naturally thaw out very rapidly, resulting in either loss or the disadvantage of a very small stock being held on hand.

British Columbia Exhibit and part of Cold Storage Showcase.

We are quite satisfied that the serious consideration of the trade in general, with the idea of going into the installation of mechanical refrigeration for their own particular line is one well worth the time.

The outfit at the Exhibition was installed by the Linde Canadian Refrigeration Company, Ltd., Montreal. This firm is a Canadian concern, Canadian capitalized, and is the only firm in this line, actually manufacturing their compressors in Canada. They have been in business for the last eighteen years, and have to-day branch offices in Toronto, Winnipeg, Calgary, Edmonton and Vancouver. They have installed practically the majority of the big fish works in British Columbia, one of their installations being the complete plant for the British Columbia Packers, of Steveston, which was only just recently opened.

The Cold Storage Chambers and Showcase.

Visit of the Hon. J. D. Hazen.

The Minister of Marine and Fisheries, Hon. John D. Hazen, accompanied by Mr. W. A. Found, Superintendent of Fisheries, and others, visited the Exhibit,

Marine and Fisheries Dept., exhibit.

and expressed himself as being highly satisfied with the display. Speaking at a luncheon later in the day, Mr. Hazen pointed out the immense development which will take place in Canada's fisheries in the future. He called attention to the fact that Canada possessed within her territorial and adjacent waters the greatest fishing grounds in the world, and as yet they were practically undeveloped. The Government were doing much to assist in exploiting this great natural resource and intended doing more in the near future.

The Canadian National Exhibition is over for this year, but the good work done for the fishing industry by the Fisheries Exhibit will undoubtedly bring the results intended.

KEEP A-PULLIN'!

If the tide is runnin' strong, keep a-pullin',
If the wind is blowin' wrong, keep a-pullin',
'Tain't no use to cuss an' swear—
Wastes your breath to rip and tear—
If it rains, or if it's fair, keep a-pullin'.

Though it's winter or it's May, keep a-pullin',
If you're in the ring to stay, keep a-pullin',
Though you can't see e'en a ray,
Sun is bound to shine some day,
Got to come 'fore long your way, keep a-pullin'.

Fish don't bite just for wishin', keep a-pullin',
Change your bait an. go on fishin', keep a-pullin',
Luck ain't nailed to any spot,
Men you envy like as not
Envy you, your job, an' lot! Keep a-pullin'.

Can't fetch business with a whine, keep a-pullin',
Grin an' swear you're feeling fine, an' keep a-pullin',
Summing up my brother, you
Hain't no other thing to do.
Simply got to pull her through, so keep a-pullin'.

—Fishing News.

A young housekeeper 'phoned to the fish market and ordered some halibut for dinner.

"How much would you like?" asked the fish dealer.

"Oh, just enough for my husband and myself. I think a medium-sized one will be sufficient."

A roar of laughter at the other end of the line caused the lady to ask, rather indignantly, "What is the matter?"

"Well, marm," was the reply, "you must be fond of fish, for the smallest halibut I have weighs 300 pounds."

A BRIEF CONSIDERATION OF THE LAW RELATINC TO THE GRANTING OF EXCLUSIVE LEASES OF AREAS FOR OYSTER CULTIVATION

By L. H. MARTELL, M.A., B.C.L., Barrister-at-Law.

Scientists, quasi-scientists, experts and would-be experts, have from time to time promulgated their views concerning the oyster industry. Pamphlets and reports, many and varied, have been issued by the Depart of Marine and Fisheries suggesting highly theoretical methods of conservation and cultivation in so far as the Oyster fishery is concerned. But I am not concerned with scientific accomplishments, in the premises, as I am not qualified to adjudicate in the matter of scientific accomplishments, for a man must be tried by his peers and the inferential application of this maxim to scientific writers on Oyster Culture would seem to me to be that the value of their effusions can only be decided by men trained in our Universities who have made a study of the bi-valve. Therefore my object is not to attempt a scientific treatise, but rather to make a concise presentation of the facts leading up to the present law relating to the administration and control of the oyster fishery in this country, and to show that there is a tendency to exclude the public from their common law rights in the oyster fishery and to grant the same to private individuals or to corporations.

The question as to whether the right to grant leases of an exclusive character for the private cultivation of oysters was of Provincial or Federal Jurisdiction was for a long time a moot question (true the Department of Marine and Fisheries did grant a few exclusive leases of oyster areas but they were null and void as Parliament did not authorize the grants and it is the province of Parliament alone to alienate from the public its Common Law right of fishery). Owing to this doubtful jurisdiction nothing of any importance was done for a long time looking towards the granting of exclusive leases. However, during the last months of 1910 or during the early part of 1911 the Department of Marine and Fisheries sought a solution of the question, and with a view to arriving at an agreement which would permit the granting of exclusive leases, suggested to the Governments of Nova Scotia, New Brunswick and Prince Edward Island, that pending a decision by the Courts on the Moot question of jurisdiction in the premises, the governments of these provinces enter into an agreement with the federal authorities which while conserving both federal and provincial rights would, after legislation was secured from Parliament, authorize and empower the federal authorities to grant exclusive leases for oyster cultivation to private individuals and to corporations.

The Government of Nova Scotia at once agreed to the suggestion of the Department of Marine and Fisheries on condition that the Governments of New Brunswick and Prince Edward Island do likewise, which they did, but before the time for executing the agreements arrived the Government of Prince Edward Island notified the Department of Marine and Fisheries of its intention not to execute the agreement. The Government of Nova Scotia was then asked if they would sign the draft agreement on condition that the Government of New Brunswick did likewise and a similar request was made of the Province of New Brunswick, the condition of their signing to be that Nova Scotia do the same. Both Governments agreed but New Brunswick subsequently withdrew its acceptance of the proposition, and as a consequence the Department of Marine and Fisheries dispaired of any amicable arrangement being arrived at with the provinces, and decided that there was nothing open to it but to await the decision of the courts on the Fishery Reference then pending, which would settle the moot question of jurisdiction.

However the Government of Prince Edward Island subsequently seemed to realize that upon it rested the responsibility for the unsettled state of affairs concerning the oyster fishery and industry, and as a consequence the Hon. J. A. Mathieson, K. C., Premier and Attorney-General of the Province went to Ottawa with a view to further negotiations in the matter, with the federal authorities. The result was the federal authorities agreed, without prejudice to Dominion rights, to ask Parliament to clothe the Govenor-General-in-Council with authority to enter into an agreement with the Governments of the various provinces whereby the Provincial Governments would be authorized to grant exclusive leases of areas for oyster cultivation and production. Pursuant to that undertaking of the federal authorities the following law was enacted:—

"The Governor-in-Council may, upon such terms and conditions as are agreed upon, authorize the government of any province to grant leases of such areas of the sea-coast, bays, inlets, harbors, creeks, rivers and estuaries of such province as the government of such province considers suitable for the cultivation and production of oysters, and any persons to whom such leases are granted by such province, shall, shall, subject to the fishery regulations of Canada, have the exclusive right to the oysters produced or found on the beds within the limits of their respective leases: Provided that, in the event of such areas, or any part thereof, being a public harbor, nothing in this section shall prejudice the right or title of the Dominion to the enjoyment and use of such harbor for every purpose other than the cultivation and production of oysters.—(Sec. 2, George V., c. 23, S. I.; 4-5, George V., C. 4, S. 61.)

Following the foregoing enactment of Parliament an agreement was at once entered into by the Govenor General-in-Council with the Government of the Province of Prince Edward Island which agreement while being without prejudice to federal or provincial rights is substantially in the words of the statute quoted.

The Government of New Brunswick also entered into a similar agreement, and the Hon. George H. Murray, K. C., L. L. D., Premier of Nova Scotia, notified the Department of Marine and Fisheries that while his

Government was prepared to adhere to its original negotiations yet they were willing to sign an agreement similar to that entered into by the Federal authorities with the Province of New Brunswick and Prince Edward Island, and the Nova Scotia Government subsequently executed such an agreement.

The Province of British Columbia at a latter date executed with the federal authorities an agreement of the same character as that consumated by the federal authorities with the provinces of Nova Scotia, New Brunswick and Prince Edward Island.

The result of the agreements would seem to be that the provinces have the authority to grant leases of what may be called an exclusive character of such areas of the sea-coast, bays, inlets, harbors, creeks, rivers and estuaries of the provinces as the Government of the province concerned considers suitable for the cultivation and production of oysters.

Following the execution by them of the agreement aforementioned each of the legislatures of the various provinces concerned, enacted a law authorizing the Governor-in-Council of their province to grant leases of areas for oyster culture upon such considerations or rents and for such term or period as may be deemed expedient, and to prescribe the form of lease and application therefor. In Nova Scotia the statute is entitled "An Act Respecting the Oyster Fisheries of Nova Scotia" and is chapter 6 of the 1913 Statutes of Nova Scotia. That Act provides that the owner or person residing on the land or any part thereof in front of which the plot or area applied for may be situated, abutted or bounded, shall have prior right to a lease of five acres of the plot or area situated in front or abutting or bounding his property. When a lease of any plot or any area of barren bottom has been applied for by any person other than the owner or owners of the land in front of which said plot or area may be situated, abutted bounded, the person authorized in that behalf by the Governor-in-Council shall give to such owners the notice set out in the schedule "A" to the Act which calls upon the owner or owners to file with the Provincial Secretary within forty days of the first publication of the notice a demand that portions of such area not exceeding five acres be allotted to him or them. On the owner or owners failing to comply with the provisions of the notice the area may be allotted to the person who has made the application for it.

The laws of the other provinces in the premises while having in view the same objects as the law of Nova Scotia, are not absolutely the same. Space forbids me entering into an elaborate consideration of the various provincial acts. Suffice it to say that they demonstrate beyond a doubt that it would have been far better if the provinces had at the outset conceded to the federal authorities the right to grant leases, for a uniformity would have resulted at any rate were the federal authorities in absolute control, and fishermen and promoters would have the satisfaction of knowing that when they complied with the federal law and regulations they had fulfilled all the requirements of the law relating to the Oyster fishery.

On the other hand the conditions now obtaining as regards the control of the oyster fishery must of necessity bring about a great deal of misunderstanding. The regulating authority, that is to say, the right to prescribe the time or times of a year when oysters may be fished for, caught, or taken, and the instruments to be employed in such fishing, catching or taking operations, lies according to Constitutional Law, with the federal authorities. It is therefore lawful for the federal authorities to at any time declare a close season of a considerable length of time and not permit oysters to be taken from any areas whatsoever, whether belonging to the public or to a private individual or to a corporation. This must have a deterrent effect upon those who wish to engage in oyster cultivation with a view to profit, for after securing a lease from the provincial authorities for a term of years and expending sums of money in the preparatory work of cultivation they might find that about the time they had marketable oysters, the Governor General-in-Council, pursuant to the authority vested in him by Parliament, had passed a resolution forbidding the fishing, catching, taking or selling of oysters for a considerable length of time, and thus the lessee, whether a private individual or a corporation, would meet with considerable financial loss with no right to compensation from the authorities responsible for the loss. I do not assert that the federal authorities would do anything so drastic, yet is is quite competent for them to do so. If the federal authorities had been conceded the right of granting the leases, and a lessee found after going to a great deal of expense in cultivating oysters and bringing them to a fit condition for market the Govenor General-in-Council had passed in the interim a regulation which would prevent him from reaping the reward of his toil and investment, it seems to me, he would be able to succeed in securing compensation from the federal treasury for the damage that acerned to him as a result of the Crown having in spirit if not in substance derogated from its grant.

Coming now to my assertion that there is a tendency to exclude the public from their common law rights in the oyster fishery and to grant the same to private individuals. I may say that it is patent that those who have taken leases of an exclusive character for oyster cultivation have not been content with what are called barren bottoms. I have been informed that in the great majority of cases the areas leased have not been absolutely barren of oysters. It is openly asserted by the fishermen of Prince Edward Island that some of the areas leased to private individuals and to corporations take in beds that, to some extent, were already productive while in other cases the leased areas come very near to encroachments upon the most productive oyster beds of Prince Edward Island.

The result will be as time goes by to gradually extend to the best public oyster areas the principle of leasing them to private individuals. The trusts seem to hold sway in Canada, the rights of the common people are constantly violated or taken away from them by statute to be handed over to the monied classes, and therefore I am convinced that one needs neither to be a prophet nor the son of a prophet to foretell the day when the oyster fishery will be, as a result of the condition now obtaining in the matter of granting of leases, absolutely in the possession of corporations. True the federal authorities still grant annual oyster fishing licenses, but if private individual and corporatons succeed in getting control as they have been doing of late, it would appear the day is not far distant when the last oyster fisherman's annual license will be granted. It therefore behoves all those who have the interest of the fisherman at heart to bring such pressure upon the powers that be, as to prevent them from alienating the rights of the professional fishermen. Corporations must not be given control of the oyster fisheries to the exclusion of the regular fishermen, for the people must rule and not an oligarchy of corporations.

ALASKA HALIBUT FISHERY

CONDITIONS AND PROSPECTS.

(U.S. Bureau of Fisheries, Document 797)

The commercial value of the halibut fishery of the Pacific now greatly exceeds that of the Atlantic, and in Alaska, as in British Columbia, it is second in importance only to the salmon fishery.

The great size of the halibut, the trifling loss of weight in dressing for market, and the generally remunerative price which it commands render its pursuit attractive to the fisherman, while its clean, white, firm-grained flesh and its capacity to withstand much handling and distant shipment, also its susceptibility of preservation in a fresh state for extended periods without serious loss in palatable flavor, find favor alike with dealer and consumer.

In food value the halibut has high rank. Compared with meat its low price and minimum of waste in preparing for the table combine to make it a favorite with an ever-increasing number of consumers. For some years a prejudice against cold-storage halibut from so distant a source as the North Pacific had a tendency to deter its extended use in the Eastern States, but, as a result primarily of the care exercised in handling and transporting, this has been entirely overcome. The growth of the trade has since been remarkable, with every prospect of a steady continuance under the present methods of distribution.

Judged by statistics of shipments, the Pacific halibut shows no decline in abundance, yet the fact remains that for some years past larger vessels of increasing power and steaming radius have become necessary to supply the market requirements. The greater part of the halibut brought into Pacific ports formerly originated from that wonderful network of channels and f ords which cut into the coasts of British Columbia and southwest Alaska. Now however the most important supply is from grounds off the outer coasts, and these grounds are being steadily developed at points more and more remote from the home ports. Small power craft continue to deliver quantities of halibut yielded by the banks of the inner channels, but it is generally conceded that the maximum of their productivity has been reached if not [illegible] in some instances actually passed. While Frederick Sound, Chatham Straight, and Icy Strait, in their wider reaches continue to receive attention from a few of the larger craft, one of the present favorite grounds for the best-found vessels is that off Yakutat. During the past few months explorations have been carried on by practical fishermen in the Prince William Sound district, and their favorable reports lead to the belief that a considerable development of the industry may follow in that region.

It is a general belief that there is little waste in the halibut fishery, but this is not strictly true. Halibut are almost exclusively caught on trawl or ground lines, which, equipped with hundreds of hooks, are set out from dories in great lengths over the bottom. At intervals, as the weather permits, the lines are underrun, the catch removed, hooks rebaited, and the lines reset, this work also being done from dories. After careful inquiry among halibut fishermen themselves, it is believed to be a safe estimate that for every halibut caught at least one other fish of more or less value for food is taken from the hooks. With those rare exceptions when black cod are retained, all these fish are thrown back into the sea, either dead or soon to perish. Except in so far as they may become food for other species, they may be regarded as a total economic loss. The fishermen have so little space in their dories that they seldom give the cheaper fishes boat room, yet a great many of them have distinct market value. The most abundant are the red rockfishes and the black cod, with the former predominating in number when all grounds are considered. True cod are found in largest numbers where the depletion of halibut is most pronounced; and deep-sea soles, flounders and skates are most numerous on a muddy bottom. It is certain that the total quantity of these fishes at present wasted is enormous in the aggregate; in weight it is probably at least one-half that of the halibut itself. That such a situation shouuld not long be allowed to continue is obvious.

Stormy weather during which it is too rough to work from dories, occurs very frequently during the winter months, and it often happens that a large quantity of gear set out is never recovered. In the meantime the baited hooks resting on the bottom continue to lure and capture fish which are never brought to the surface, and which inevitably come to a miserable end. How important a factor this condition is in the depletion of the grounds is problematical, but in those regions most subject to unfavorable weather it certainly must contribute in no little degree to the threatened future of the fishery. Fishermen freely admit heavy losses of gear, and do not deny that the results of such losses can not help being felt in time. The intervals of fair weather are so infrequent during the period in the region under discussion that every moment when dory fishing may be carried on is taken advantage of, and frequently lines are laid out on the mere chance that they may be recovered later, notwithstanding that all signs point to the contrary.

As a result of this, and probably due in part also to the establishment of cold-storage plants in close proximity to the more prolific fishing localities, another change in the type of vessels and their methods has been inaugurated. This latest development is towards a reduction in the size, power and cost of maintenance of halibut cruisers. The idea is that they shall be sufficiently large to remain at sea in moderately heavy weather, such as when trawl-line work from dories would be unsafe, and at such times to set, underrun, and reset the lines from the main craft itself. To this end the power "gurdy" a sort of winch for lifting the ground line from the bottom, has been devised and may be expected to come more and more into general use. As the employment of power entails a greater strain on the gear handled, the tendency is towards the use of heavier ground lines, and one dealer in Seattle has already laid in a supply of 36-pound stuff to take the place of the 30 and 32 pound articles at present in vogue.

That a further development of the halibut-fishery industry may be expected with the opening of the Panama Canal is not improbable. It is reported that agents of certain Atlantic steamship lines are already planning to equip vessels with cold storage accom-

modations of several hundred tons capacity each, with a view to the transportation of choice fish from north Pacific ports to European markets. With so potential an expansion of market demands, it seems not unreasonable to suppose that the present waste of the food fishes taken incidentally with the halibut may be nullified if present tendencies to save them develop in the manner hoped. Where the lines are lifted from the bottom by power and the catch is landed on the deck of the cruiser itself there is no reason why all food fishes should not be struck into the hold and carried to a cold storage plant adjacent to the fishing ground, there to be cared for until shipment to the distributing centers.

In the matter of cold storage and freezing the halibut industry has made notable advances in southwest Alaska this year. The thoroughly wholesome condition and appetizing appearance of the frozen halibut, with its thin coating of clear ice which effects an absolute hermetical sealing, is bringing this fish to the popular attention it rightly deserves.

Three new companies have engaged in cold storage halibut operations this year as the chief feature of their business. These are the Juneau Cold Storage at Juneau; the Booth Fisheries Company at Sitka; and the floating plant of the Glacier Fisheries Company on the ship Glory of the Seas, located at Idaho Inlet. The Columbia and Northern Fishing and Packing Company at Wrangell has also extended its business this year to include cold-storage facilities. Other concerns which engaged again this year in cold storage and other operations were the New England Fish Company at Ketchikan; Taku Canning and Cold Storage Company at Taku Harbor; and J.Lindenberger (Inc.) at Craig. The combined cold storage and canning plant operated last year by the Weiding and Independent Fisheries Company on the ship William H. Smith was not sent north this season. The schooner Metha Nelson, which did cold-storage work in the vicinity of Kodiak last year, was not operated this season.

The new plant of the Booth Fisheries Company at Sitka appears to be very favorably located as regards proximity to the halibut grounds. A modern plant has been erected with storage capacity of 500,000 lbs.; two sharp freezers have been installed with a total daily capacity of 25,000 pounds. Announcement has been made that the plant will be enlarged soon.

In addition to other features of its business, the Juneau Cold Storage Company has storage capacity of upwards of 300,000 pounds of frozen fish. A 14 ton ice plant has been installed and there is storage space for 150 tons of ice. Although the principle business of the Columbia and Northern Fishing and Packing Company at Wrangell this season has been the mild curing of king salmon, a considerable quantity of halibut has been frozen. A sharp freezer of 10 tons capacity has been installed and there is storage room for 150,000 pounds of frozen fish. A very complete cold storage plant was installed by the Glacier Fisheries Company on the ship Glory of the Seas, which vessel during the last two years has been operated as a floating cannery. The daily capacity of the sharp freezers is 60,000 pounds, while the total cold-storage facilities will enable the handling of approximately 3,000,000 pounds. The vessel was towed to Idaho Inlet in June and was brought back to Seattle in the fall with the season's product. The Taku Canning and Cold Storage Company at Taku Harbor has storage capacity for approximately 450,000 pounds of fish .This concern utilized, in part, the barge Dashing Wave in connection with its cold-storage operations. The largest cold-storage plant in Alaska is that of the New England Fish Company at Ketchikan, which now has facilities for handling 100,000 pounds daily and a total storage capacity of 6,000,000.

In connection with what has been said elsewhere concerning the utilization of those products of the fisheries now generally regarded as waste, it may not be out of place to call attention to the very considerable quantity of nutritive material which is a part of the head of the halibut. In northwestern Europe this is considered the choicest part of the fish and many delicacies are prepared from it. If the heads of the large numbers of halibut taken in Alaska could reach the hands of such establishments as the Revilla Fish Products Company at Ketchikan, where various special fishery preparations have already been put on the market, it would appear that a further value might accrue to the halibut fishery.

While fresh and frozen herring continue to be the favorite bait for halibut on the offshore grounds, also on the inside banks during the winter months, it has been found that fresh salmon is a superior attraction in the regions adjacent to the canneries and salteries during the salmon-packing season. At this time the halibut are enticed from distant points, probably by the offal from the packing establishments, and as long as the canning season continues a hook baited with a liberal piece of salmon is said to surpass all other lures.

During December, 1913, one of the revenue cutters gave attention to the question of whether alien vessels were taking halibut within the three mile limit on the lately developed banks between Yakutat and Prince William Sound. It was found that most of the fish are taken in depths of from 40 fathoms to the 100 fathom curve, which in this region are at least 3 miles offshore.

Statistical Summary.

On account of the entrance of four new companies in the halibut-freezing business and the construction of new vessels the investment in halibut operations increased from $2,036,050 in 1912 to $2,360,025 in 1913, a gain of $323,975. The number of persons engaged also increased from 1,038 in 1912 to 1,256 in 1913, a gain of 218 persons. More activity was displayed this year by small power boats operating on the inside reaches. These small boats fished chiefly for the cold-storage plants. Returns show that the weight of prepared halibut products credited to Alaska in 1913 is 13,437,784 pounds as compared with 16,896,743 lbs. in 1912, a decrease of 3,458,959 pounds. The figures shown refer to all vessels fishing for plants operated in Alaska, as well as those vessels from Puget Sound fishing in Alaskan waters, with the exception that catches from extra-territorial waters of Alaska landed directly at Puget Sound ports by the fishing vessels are not included.

Investment in Alaska Halibut Fisheries in 1913.

Items	Number	Value
Fishing vessels, steamer and power	162	$1,212,000
Tonnage	3,327	
Outfit	——	582,225
Boats:		
Dories	441	22,050
Sail	6	575
Apparatus Trawls and fishing gear	——	73,175
Shore and fixed property	——	470,000
Total	——	$2,360,025

Persons Engaged in the Alaska Halibut Fisheries In 1913.

Races	Number.
Whites	1,216
Natives	40
Total	1,256

Products of the Alaska Halibut Fisheries in 1913.

Products.	Pounds. a	Value.
Halibut:		
Fresh	3,642,163	$114,277
Frozen	9,987,310	454,320
Dry Salted	21,159	830
Fletched	37,152	1,887
Total	13,687,784	$571,314

a—Prepared weight.

Fishermen of Newfoundland Do Not Trust Banks

Fishermen's Union Very Strong in Island Colony.

A new business and political factor has made its appearance in Newfoundland in the Fishermen's Union. From time immemorial the business of the Colony has been conducted from St. John's, whose merchants became wealthy and powerful, with a population of 240,000 people, commercially speaking, at their feet. But a change is developing. The St. John's merchant, still very powerful, is not omnipotent as before. , The railway is making itself felt, and is establishing the man who does business in the "outport" as a more important factor. More than this, there has been organized the Fishermen's Union, with W. F. Coaker, M. L.A. at its head. This organization has as its professed purpose the emancipation of the fisherman from the power of the St. John's merchants, the keeping for themselves of the profits of their industry, and the sharing of as little of the gain as possible with the merchants. The Union buys the dried fish from the fishermen, and it establishes stores where they can purchase their goods. The stores are run on a cash basis, with absolutely no credit. The fish are transferred by the Union to shippers, the cash is paid for them, and the union stores receive the funds back in return for supplies. It is a risky business for the Union. A decline in the value of fish, or a failure of the catch, would be a serious thing for its financial operations. The Union has seven out of the thirty-six members in the House of Assembly, and a slump in fish or a shortage in the catch might be serious for the Union, not only in its business but in its political operations.

The facts commented on as remarkable that fishermen, who are so cautious of their money, as to refuse to deposit it in the banks for safe-keeping, are found investing it in the enterprises of the Fishermen's Union.

The dread of the bank, entertained by the Newfoundland fishermen, was exemplified at a sitting of the Dominion's Royal Commission in St. John's at which the correspondent of the Financial Post was present. Evidence was being given by Mr. Fairn, secretary of the local Board of Trade. Sir Rider Haggard had the witness in hand, and was asking some questions about the wealth of the people and what they did with their funds if they had any. Sir Rider Haggard looked up in suprise when Mr. Fairn said:

"The fishermen of Newfoundland have three and a half millions of dollars buried in their gardens."

"What, do you mean it?" said Sir Rider.

"I do," was the reply.

"Then I think Newfoundland would be a good place to come to in search of hidden treasure," was the response of the noted author of "King Solomon's Mines."

Mr. Fairn explained that, after the bank crash of some years ago, many of the people became so scared that they would entrust no money to the banks, and actually hid it away in the manner described. He stuck to the amount that is thus put away for safe-keeping, and there seems authority for it. There are four brances of Canadian banks in St. John's, and the only other local monetary institution is the Government Savings' Bank. The banks are all within a stone's throw of each other—the Montreal, Royal, Commerce and Nova Scotia. The last named has some ten branches throughout the colony, and is extending its system more energetically in this territory than are the other banks. The result is that the Bank of Nova Scotia is gradually obtaining back a share of some of those three and a half millions that Mr. Fairn told Sir Rider Haggard about, and the other banks are also getting it.

There is no doubt that, on the whole, the Newfoundland fisherman is independent and fairly prosperous, but he would do well to be cautious in his business relations with any co-operative organization which combines politics and business. The fishermen's Union is an enterprise of this kind.—Financial Post.

THE LABRADOR FISHERY.

The same conditions that have prevailed on the Newfoundland fishing grounds, are reported from the Labrador coast, viz: the opening of the voyage was delayed a month or five weeks later than usual. It is rather early yet to summarize the Labrador voyage, but as far as may be judged at present, it will work out at: a poor Strait's fishery, a poor stationer's fishery, and a fair floater's fishery. As the floating schooners have not all arrived home at this writing, it it impossible to even hazard a guess at the size of the voyage.

Owing to the lateness of the season, we are of opinion that a greater percentage of the Labrador voyage will be brought home to Newfoundland for cure and shipment this season than ever before. As it will be almost impossible to prepare some of it for the dry, or semi-dry market, this year, we have no doubt that owners will turn their attention to the possibility of marketing in the United States. A good deal of Straights fish has already been sold in the United States this year, and we have no doubt that there is a further market for some of our Labrador fish there, if the goods and made right. This is a matter worth inquiring into. — The Trade Review.

What was said to be the largest sturgeon ever caught in the North Channel was taken in a pound net at Old Woman Harbor six miles from Little Current, Ont., by John Lapointe. From tip of tail to end of nose it measured 7 feet 8 inches. Its circumference behind the fins of flappers was 3 feet 8 inches; its weight 274 pounds. The value of the fish, which was shipped to the New York market was slightly over $200, it containing 51 pounds of caviare, worth $3.25 a pound.

DEEP SEA FISHING IN GREAT BRITAIN

By JAMES JOHNSON, F. R. Hist. S.

An Interesting Article Which Will Give Canadians an Idea of the Work of their British Brothers in the Fisheries.

The call of the sea may not only be found by actually voyaging on the face of the deep, but often between the leaves of a book such as I lately came across in "The Fisherman's Nautical Almanac," a fascinating hand-book of more than 500 pages, which contains everything that the captain of a fishing trawler cruising on the British seaboard or Continental shores needs to know, and a landsman can thoroughly enjoy.

A trawling captain may learn from it a world of information to aid him in his craft of deep-sea fishing, concerning flags and funnel marks, buoys and buoy topmarks, lightships, storm signals, harbour lights, nets and rockets, ports and tides, in fact all matters that promote the interests of a sailor-fisherman who does business in great waters.

It is amazing to be informed that thousands of vessels of fifteen tons and upwards, belonging to the United Kingdom, follow the harvest, of the wide seas. Brixham, for example, has 326 vessels; Fleetwood, 227; Grimsby, 1,228; Hull, nearly 1,300; London, 1,197; Yarmouth, 997; and Lowestoft, 1,195. And what strange and beautiful names these sea-rovers boast. The owners seem to have chosen them from every quarter of the globe, from all lands and times, and all classes of celebrities. Among these are "Pilgrim," Onward Ho," "I'll Try," "Protect Me," "Quiet Waters," "Never Can Tell," "Kindly Light," "Forget-Me-Not," "Happy Return," "Bread Winner," "Gratitude," "Puritan," "Anglican," "Bounteous Sea," "Jehovah Jireh," and "Toilers of the Deep." Some have such imposing names as "Micheal Angelo," or, "Grecian Empire," "Victoria Cross," etc. Others, again, are called after dear ones at home—"Our Lizzie," "Our Girls," "Our Laddie," "Girl Winnie," "Welcome Boys," and so on, and perhaps the editor will be surprised to know that at Hull a fishing boat carries the unusual name of "Editor."

But, of course, the main object of this fisherman's volume is expressed in one word—guidance—amid the perils King Neptune can evoke.

If the skipper is adept in his work, he will make himself fully acquainted with endless details about the lighting and buoyage on Britain's coasts and Scandinavian waters. The buoys, e.g., have every variety of shape—they are flat, domed, pillared, square, erect or leaning, and of diverse colours—black, red, green, striped. These are placed in channels, at the mouths of harbours, or above the treachery of sunken rocks—like Goodwin Sands—which seafarers look for with viligent eye. Then there are wreck buoys, denoting wrecks and wreck-marking vessels, all of which are helps to navigation to tell the mariner when approaching dangerous shorelines.

Not infrequently, strange to add, buoys and sandbanks change their position by reason of storms and other causes, and greatly imperil the fisherman's life.

Much is said with reference to various kinds of fog-signals. These consist of fog-horns, trumpets, sirens, guns, explosives, fog bells, submarine fog bells, and the like, to which the skipper, in foggy weather, much give ceaseless attention. It is surprising to note that fog warnings vary in loudness of tone according to the wind or thickness of fog. As perplexing, too, is the fact that large areas of silence have been found in the atmosphere through which sound scarcely travels at all. Captains are therefore informed not to suppose because they hear a fog signal faintly that they are a great distance from a rockbound shore, nor, on the other hand have they to conclude they are near to it if they hear the sound plainly. For instance, a fog-signal under favourable circumstances may be heard from a distance of ten miles and upwards, where, in another condition of weather, it is only audible two or three miles away. A skipper is consequently advised to take soundings with the lead as to the depth of water and his nearness to a rocky coast in order to avoid danger or possible shipwreck. No wonder, as a skipper once observed to the writer, that fogs turn their hair grey and make them eager for clear weather.

Around the British Isles there are 1,180 lighthouses and light vessels, with all manner of lights—fixed, flashing, group flashing, grouped and flashing, revolving and alternate, of varying tints which a captain should readily know and understand. Here are two examples of lighthouse codes:—

Bell Rock: Near north end of reef latitude 36deg. 26 min., longitude 2 deg. 23 min. W.;flashes white and red alternately, visible fifteen miles. Shows red flash about 2 seconds, eclipse about 28 seconds; white flash about 2 seconds, eclipse about 28 seconds. Fog explosive gives a report every 5 minutes.

Longstone, near the Farne Islands (the scene of Grace Darling's gallent deed in 1838): On western side of islet, latitude 55 deg. 39 in., longitude 1 deg. 37 in. W.; revolves white every half minute, visible fourteen miles. Fog siren gives two blasts every minute, thus: Blast 2½ seconds, silence 2½ seconds; blast 2½ seconds silence 52½ seconds.

To prevent collision at sea the captains of fishing steamers have orders to affix lights—red, green and white—in different positions and according to the movement of their vessels. At the same time, whatever the regulations, they are urged to test and examine the lights that no error can happen.

At certain points on British coasts storm-signals are hoisted, with instructions how they may be seen and read at night, and how the letters of a silghtly abbreviated alphabet are made to notify to the fisherman the state of the weather. Usually the skipper knows this meteorological alphabet by heart. In addition to these storm codes, his weather lore often serves him on the trackless deep, of which the following rhyming verse is a specimen:—

When the glass falls low,
You must prepare for a blow;
When it slowly rises high,
Lofty canvas you may fly.

It was an old tar who once exclaimed, his face all gnarled from winter storms, "But things happen different on salt water than they do on land; there is no hard and fast rule."

So innumerable are the directions and charts that a fisherman in command of a steam trawler may sail out of any port in the United Kingdom and find the way, from buoy to buoy and lighthouse, to the Faroe Is-

lands, the Lofotens or Remote Iceland. He may gather from the "Almanic" pages how to fire rocket signals in distress, to regulate his compass when affected by magnetic rocks or ocean beds, to cast his line and how to avoid submarine cables to revive the apparently drowned, and even how to fare if he happens to be thrown on the Skeidara Sands, a desolate part of the south coast of Iceland, a veritable ships' graveyard that claims uncounted wrecks.

When he has passed difficult examinations and got a nautical equipment, a skipper on the fishing ground soon realises the meaning of:—

Blow, blow, blow,

as the waves rise mountains high. The life of the crews is a most strenuous one, and although net fishermen have sometimes been described, "wild in port and stiddy at sea," countrymen ashore with any fellow-feeling will truly pray "for those in peril on the sea."

One does not wonder at the story of a poor aged mariner, after many tempest-tossed voyages and fears, exclaiming with thankfulness, in his last moments: "No more ships! No more ships!"

The industry is one of great hazard and the marvel is, all things considered, that very many more disasters do not occur than are recorded in connection with it. Possibly we do not appreciate the gallantry of sailormen who toiled year in and year out and ran the risks of stormy seas. The fisherman's lot was one of the harest type. He had hard times and hard work, especially in troubled oceans or when shrouded with fog.

It was necessary, of course, that the trawlers must fish where there are fish to caught, and that is not generally in the safest waters, Near Iceland, Borkum Ridge, and round Scotland are countless rocks and tempetuous shores, and lighthouses are not as numerous as one could wish. Then again the south coast of England and the North Sea shores, as well as the Dogger Bank, have bad shallow places where there are only eight or ten metres of water. In fine weather that is all very well; but when the storm rages there is the fearful ground swell that so easily overturns these little steam trawlers, and in spite of all that machinery and charts have done, some 400 of them have been lost within the last thirty years without leaving a trace behind.

What is quite evident, one learns, that there is a growing demand from year to year for fish as food, both at home and on the Continent, which cannot fail to affect the value of fish practically of all kinds. What may be termed Britain's sea harvest had a phenomenal record in 1912. The total landings of fish exclusive of shellfish, as recorded in the returns received by the Fisheries Board from their collectors, was more than 14,500,000 cwt., and the entire value of all fish landed from the sea, including shelfish, durinng the same period, was nearly 9 1-4 million pounds. In no previous year for which records exist has either the aggregate of the landings of fish or their total value been so great; while the past eleven years show an almost unbroken increase of the total recorded catch from year to year, accompanied by an increase of the total financial returns.

It would, however, be a mistake hastily to infer from the growing bulk of these annual landings an increase of the aggregate stock of fish available. This increase, is for the most part, to be accounted for, so far as can be seen at present, by improvements of the machinery for taking fish, notably the steam trawlers and motor fishing vessels, the latter yet in their experimental stage, coupled with the geographical expansion of the enterprise of British fishermen. At the same time, other factors must be taken into account, such as the gradual popularisation for table purposes of certain fish which formerly either did not reach the markets at all, or were regarded of minor importance on arrival.

The remark has been made that the highest type of civilisation is betrayed by the use of fish, and our Canadian kinsfolk tell us that for superior mental ability the men from the maritime provinces of the Dominion generally stand at the very top of affairs, whether in be in education, politics or commerce. One may hazard the opinion that English people don't use half enough fish. But that may be due in a measure to the lack of railway facilities to bring the produce of the waters to their doors in proper shape and uantity.

As regards their numerical superiority of trawling fleets, England and Wales have an overwhelming majority over that of the rest of the United Kingdom and of every other country, an index of the importance of the English fisheries. If it were possible, it would be extremely interesting to have a census of the capital invested and the people employed in this vast industry itself, and in those other industries which are allied to it. Such a census is hardly practicable, though the replies to inquiries set on foot suggested tha tthe total capital invested in the fisheries and certain allied industries of the type of fish-curing and the marketing of fresh fish, cannot fall short of some £60,000,000, or the workers employed at some 35,000 in number.

At Fleetwood, the chief fishing port on the West coast, the Fleetwood Fishing Vessel Owners' Association have 130 steam trawlers, and others in building with a capital value of ships, works, etc of £1,000,000, and about 3,500 employes.

As gratifying is it to know that British fish-curers are men of enterprising metal. While the greater proportion of the fish cured in the United Kingdom is detained for export, the demand for cured fish in this country, where fresh fish is not readily obtained, being naturally inconsiderable. Meantime it is satisfactory to observe that the exports, both of fresh fish and of cured or salted fish, indicate a steady upward progress; yet there is undoubted scope for a huge development of the British trade in fish with foreign countries, such as Germany in herring and the United States for pickled mackeral, etc.

We are told that, of the total of 7,321 boats for 1912, 2,695 were employed exclusively in trawling; and of the 3,456 first-class boats, 2,510 were so employed, 1,337 being steamers and 913 sailors. If it be to the advantage of every nation to maintain in being a country population engaged in country pursuits, and, in the case of an island power like England, a population accustomed to the sea, special consideration is therefore due to any measures proposed for arresting the increasing tendency of the lesser fishing ports to drift towards the towns or to emigrate.

Happily a great future appears in store for British fisheries, and most probably any immediate development of the fishing industry will take the form rather of exploiting more distant and deeper grounds and of utilizing to the fullest extent all and every product of the fisheries, than of any great increase of the actual number of vessels and men employed in deep-sea fishing.

Another claim to attention and support of our fisheries lies in the fact that they maintain a hardy, healthy population on Albion's coasts which contributes to

the Navy and the Royal Naval Reserve, and furnish an indispensible asset to the general national physique.

Britain's fisheries on the broad seas are certainly no sport for braggarts; rather a school for men, which is more valuable. They are the high school in which old England's sailors are formed, the academy of our imperial marine; while not a few sons of these have risen to conspicuous rank in the Navy.

—Millgate Monthly.

The Herring--The King of Fish Foods

There is no more wholesome fish, for rich and poor alike, than the "homely herring," and when it comes to the "all-important question" of considering the cost of living, fish potatoes, peas and rice, oatmeal, etc., which can be cooked in so many ways, shapes and forms, must claim first place on account of their food-sustaining properties and their cheapness.

Herring whether fresh, salted of pickled, when properly prepared, form at once an ideal and satisfying food for the people.

Just as salmon is known as the "rich man's fish," so the herring has been christened as the "poor man's fish"; but it should be added that herring, when correctly cooked, is sought after by the rich quite as much as by the poor.

In composition, the herring is, indeed, similar to salmon, whereas it has that distinct advantage of being cheap enough for the most slender purse. Few people are aware that a couple of herrings contain sufficient nourishment, that is, proteid and fat, to keep a working man going for a whole day, at a trifling cost, whilst at least half a pound of lean beef or mutton would be required to fulfil a similar purpose.

With the addition of some potatoes, boiled or baked, or boiled rice, a "well balanced meal" is supplied, the former supplying the necessary starch to make it so, and it is questionable if a more satisfying meal can be furnished at so small a cost.

Herrings, like every kind of fish, must be quite fresh to be enjoyed; they must be thoroughly cleaned before being cooked in order to be wholesome and palatable. Fresh herrings must be washed, but never soaked, in cold water, because soaking draws out some of the goodness, the so-called soluble nutriment of the fish. The herring does not lend itself to many varieties of cooking, but it is a fact that each of the approved cooking methods, which are quite simple and easy, render the fish quite palatable.

To prepare fresh herrings for cooking.

Steaming is the most delicate, economical and digestible way of cooking almost every kind of fish. Clean the herrings, then place them in a steamer, or on a plate placed over a saucepan of boiling water, and cook for about 25 to 30 minutes, then dish up and serve with mustard sauce.

To make mustard sauce. Peel and chop finely half a small onion, and boil it in a saucepan with a quarter pint of salted water, till tender; mix to a paste a heaped-up tablespoonful of flour with a little cold milk, add to it a teaspoonful of mustard and stir into the boiled onion, then add about half a pint of milk, bring to the boil, and cook, whilst stirring, for about ten minutes; lastly, add about a tablespoonful of butter or margarine, divide this into very small bits. Season to taste with salt and pepper, stir well and serve.

Fried Herring.

Scale, gut, wash, and wipe four or more herrings as may be required and cut off the heads. Split the fish open, and take out the bones. Season the cut sides with salt and pepper, and dip them in a little milk, and then in oatmeal. Have ready some hot dripping in a frying-pan, and fry the herrings to a nice golden brown; they will take about ten minutes to cook. Drain the fish well, dish up, and serve hot, with a dish of boiled potatoes or boiled rice.

Boiled Herring

Scale, gut, and clean the herrings, wash and wipe them, rub them over with salt and vinegar, then skewer each, and place in a flat saucepan containing sufficient hot water, seasoned with salt, to well cover the fish, and boil for about ten minutes.

Take the herrings, drain them carefully and dish up—garnish with sprigs of fresh parsley and lemon quarters—serve with plain or mustard sauce.

Note—A little vinegar or lemon juice added to the water in which the fish is cooked is an improvement.

Broiled Herring.

Scale, gut, wash and wipe the herrings, when well drained, dip each fish in a little flour. Make three or four insertions across each side with the point of a knife. Brush them over with a little salad oil or oiled butter. Put them on a griller and cook over or before a bright fire for about ten minutes, turning them occasionally. Dish up, garnish with parsley, and serve hot with a dish of boiled potatoes or boiled potatoes or boiled rice.

Baked Stuffed Herrings.

Scale, gut, wash and wipe four herrings; slit them, remove the heads and backbones, and season with salt and pepper. Spread on a little stuffing made of 2 tablespoonful bread crumbs, 2 tablespoonfuls milk, 1 tablespoonful chopped suet, 1 desertspoonful chopped parsley, and half teaspoonful mixed herbs. Roll up each fish. Place them in a greased pie-dish or baking dish, brush over with beaten egg or milk, prinkle over with bread crumbs, put a few bits of dripping on top, and bake from twenty to twenty five minutes in a moderately hot oven.

Fried Fillets of Herring.

Clean, wash and wipe four herrings, cut off the fins from each and remove the skin carefully. Beat up an egg with a desertspoonful of milk or water. Season the fillets with salt and pepper, and dip each into beaten egg, or else brush over with egg, then cover them with bread crumbs. Fry the crumbed fillets in hot fat, clarified dripping or lard, of a golden brown. Take up, drain and dish up the fish. Garnish with quarters of lemon and sprigs of fresh parsley; serve hot.

Herring Pie.

Clean, wash and wipe four herrings, cut off the heads and fins. Split each open from the back, and remove the bone from each. Next season the cut side of the fish with salt and pepper and roll up, beginning at the tail end. Grease a pie-dish and place in the rolls of herring, put in about a gill of ginegar and about half a gill of water; add also half a bay leaf, then cover with a good layer of mashed potatoes, smooth the surface neatly, brush over with milk or egg and bake for about 35 minutes in a moderately heated oven.—C. H. S., in Fishing News.

THE BLACK CAT

A "LAY OFF" YARN OF THE FISHING FLEET

By FREDERICK WILLIAM WALLACE.

THE schooner was lurching and pitching to the long chop of the Atlantic seas sweeping over La Have Bank. The afternoon set had come aboard early, and after dressing down, all hands, except two men on watch, were below enjoying the lay off after a day of hard hauling on the trawls. Aft, the gang were hugging the genial warmth of the cabin stove either watching or actively engaged in playing the favorite fisherman's game of Hilo Jack. It was a dirty night outside, wet and as black as the inside of a jack boot, and the two on deck shivered in their oilskins and kept a haunting eye on the cabin clock.

The for'ard gang were all in their bunks smoking and passing caustic comments on the quality of the cook's doughnuts—culinary criticisms which the latter gentleman was vigorously denying from an upper bunk. "Never mind, cookey," exclaimed a voice from the peak. "Your doughnuts are all right. Ef ye'd only make th' holes a bit larger, I cal'late a feller c'd use 'em fur nippers when haulin' trawls—they'd never wear out." A roar of laughter from all but the cook greet his last shot and the gang subsided in quietness to take a new interest in watching Jack Taylor blowing smoke rings at the cat. His feline majesty was sitting on the starboard locker by Taylor's bunk and sniffed and objected most strenuously to the rank dour of plug tobacco which greeted his nostrils. At last, after a particularly suffocating puff, Pussy sneezed, jumped out of range, regarding Taylor with a malevolent stare.

Old Jim Mason, the hardest and toughest fisherman in the whole of the Canadian fleet, broke the lull. "That's a purty good natured cat," he remarked. "He ain't a bit like one I wuz shipmates with in th' old 'Jessie Manson' 'way back afore most o' ye were born. A reg'lar devil it was, an' as black as the ace o' spades. I mind the night when poor Tommy Cantley started ablowin' smoke inter it's face while we was alayin' off, an' th' way th' blame' cat went fur Tommy. He jest sprung for him off'n th' locker, spittin' an' swearin', an' by Godfrey, ye'd ha' thought that Cantley had got his figgerhead snarled up in his own trawl lines. He was scratched up somethin' awful an' ef my dory mate Manuel hadn't ha' called his black devil off I believe it would ha' had Tommy's eyes out. Oh, but he was a devil—jest like th' feller that owned him, an' ever since I went dory-mates with Manuel Costa an' his cat, I ain't had any use fer the animals. I won't have one around th' place at home, even tho' th' ol' woman has bin wantin' ter keep one for th' past twenty years or more. Aye, he was th' devil himself."

The jocular person in the peak bunk enquired, "An' what c'd ye find in an ornery black cat t' scare you, Jim? Sure, I niver h'ard that you were superstitious? Onless, maybe——"

"Maybe what?" growled Mason.

"Oh, nothin'," remarked the funny one. "I wuz goin' ter say that maybe ye c'dn't stand fer havin' two cats to home——" There was a pause and an audible snigger, as Old Jim felt for a sea boot. Turning around in his bunk, Mason glanced savagely into the gloom for'ard. "Ef th' pawl post warn't in th' way, ye'd feel th's heft o' my redjack, ye consarned ——. But there, what kin ye expect from a young fish wharf money what couldn't haul a forty pound halibut in 'thout a gurdy."

"Aw, niver mind him, Jim," said the cook. "Let's hear th' yarn about that black cat. I mind o' hearin' suthin' about that same beast when I was in the 'John T. Morris' out from Gloucester. That feller Manuel Costa used ter be shipmates with a Portygee I know'd an' he told me some queer tales about that same cat." A line of heads reached out from upper and lower bunks and a chorus of entreaties followed the cook's.

Old Jim reached into the shelf at the back of his bunk and producing a plug of "Master Workman" proceeded to cut a fill for his pipe. "I don't mind givin' ye th' story, boys, but there are some fresh youngsters in this fo-castle that hev allus suthin' to say when their elders make a remark. They're like some o' them ugly ballast fish we sometimes git on th' hooks—all mouth."

"Oh, go ahead, Jimmy," cried the offender in the peak. "I'll take it all back. I wuz only jollyin' you."

There was the dim hint of a smile around the corners of old Jim's mouth and a imperceptible creasing of the lines at the tail of his eyes as he accepted the apology, and placated, he lit up and commenced.

"It was a good many years ago when I was dory-mates with Manuel Costa. We were in the old 'Jessie Manson'—her that was lost on th' Sou'west Ledge in ninety-five—and Wylie Calvert was skipper. We left Anchorville on a shackin' trip fur th' Cape Shore grounds on a bitter cold December day. I kin well

remember how cold it was an' th' time we had in standin' down th' bay—iv'rything iced up an' all hands poundin' fur dear life ter keep the ol' pedlar clear. I had come aboard th' vessel a bit late an' had ter take this Portygee, Manuel Costa, as a dory-mate. It was his first trip with us, as th' skipper got him outer a Provincetown craft, an' consequently none o' th' gang knew much about him. Some o' them Portygee fellers are good men in a dory and kin haul a trawl, pull a loaded dory, and bait up as well as most that use th' sea in this work, an' some o' them are mighty good fellers all round, This Costa, however, wuz different from any o' th' breed as ever I had bin shipmates with. He was yaller skinned an' black haired like they all are, but the eyes o' him I didn't like. They hed a devilish yaller color to them, an' th' pupils would contract and enlarge jest like a cat's, while th' only thing ye c'd get outer him would be a surly grunt. We rigged a couple o' tubs o' new gear on th' run down off th' Cape, an' I soon found out that my new dory-mate was a reg'lar scorcher at this work. He c'd stick two new gangings to my one, an' as for hookin' up—th' hooks seemed ter fly outer th' gangings with a snap—so quick he was, an' I was congratulatin' myself at gittin' an able man in my dory. A man that c'd rig gear the way he did was indeed a treasure." Mason stopped for a moment and pressed down the tobacco in his pipe with a calloused finger.

"He berthed for'ard in th' foc'sle an' had one o' them after lower bunks on th' starboard side—jest th' same as what Taylor has now. He didn't like that bunk, but wanted ter git up in th' peak, but th' feller as drawed them wouldn't exchange, so Manuel had to stay where he was, though we c'd see he was a bit mad. That same night, I h'rd somethin' scratchin' an' kinder mutterin' below me in Manuel's bunk. Th' lamps were turned down in th' foc'sle an' all hands were snorin' hard, so I listens again thinkin' I might ha' bin dreaming. Fur a full minute I lay awake listenin' hard, and then I heard th' mutterin' again an' c'd make out Manuel's voice awhisperin' in his own lingo to somethin' or somebody. For several minutes the whisperin' went on an' I c'd swear I heard someone answerin' back in a foreign tongue. Th' fo'castle was dead quiet except fur th' breathin' o' th' gang asleep, th' bubblin' o' th' water outside an' th' cheepin' o' the' jumbo sheet overhead, an' I c'd hear th' conversation quite distinct, altho' it was carried on in a whisper.

"Now, I ain't an easily scar't man, but I do own that the uncanny goings on in th' lower bunk kinder raised th' hair on th' back o' my neck, an' causing me ter sweat some as I listened. Manuel seemed ter be pleadin' an' protestin', while the other party, whoever it was, was whispering in a savage, bullyin' way as ef he was givin' th' Portygee hell for somethin'. After a little while, th' blood starts ter run in me veins again an' I raises myself on my elbow for a peep down into Manuel's bunk. As I said afore, th' foc'sle lamp was turned low an' shaded off from Manuel by a piece o' paper stuck inter the burner outside o' th' chimney, an' consequently th' Portygee's bunk wuz in black darkness. Over my bunk-board I leaned, the whisperin' still goin' on, when out falls my pipe an' clatters on th' locker below. Two pairs o' yellow, gleaming eyes glares at me from th' blackness of Manuel's bunk somethin' spits an' scrapes a handful o' fish hooks across my face, an' I gives a yell an' tumbles outer my berth on to the floor. All the gang was out in two shakes, the lamp was turned up, an' there was Manuel sittin' up in his bunk an' strokin' a big black cat which was archin' it's back an' hissin' at me like a snake. "What th' dickens is th' row?" said one o' th' gang. "What are ye yellin' for, Jim?"

"Manuel gives one o' his half savage smiles, an' showin' his teeth, says, 'I teenk ma leetle cat scratch heem?' "

"Th' Divil ye say," says Tom Cantley, "an' where in th' name o' thunder did that baste come from? Sure 'tis th' first time I iver saw th' brute."

Manuel gave the crowd a malignant glance from his yellow eyes—pon my soul, boys, they were jest like th' cat's,—an' he answers: "I breeng ma leetle cat wit' me. He stay een ma bunk all da tam'—" "Well," I chimes in, "for gawd sake tell him to keep his hooks ter himself. Sure an' he's clawed me up somethin' sinful. Fancy gettin' a black imp like that on yer face when yer reachin' over yer bunk ter get a match off th' locker."

The vicious look faded off'n th' Portygee face when I said this, an' he purred in his soft Western Island's way. "I'm sorry, Meester Jim. Ma leetle cat was scare! She weel haf to be goot fr'en's wit' ma doree-mate—eh, Nina mia?" Well, that was the end of that incident. The crowd cursed some at bein' out and went back to their berths, while I turned in an' thought over the affair for the best part of the night. Next mornin' the after gang comes for'ard for breakfast an' they all seemed astonished at seeing the cat in Manuel's bunk, for although he had been aboard three days, none of us had ever seen it afore. Later in the morning, the skipper passed the word to bait up as we had made our first berth to the s'uth'ard of the Seal Islands, and with th' work in gettin' ready for th' first set, I forgot all about Manuel's cat until we started gettin' th' dories over th' side. Our dory was the last to go over and after placing the tubs o' gear in, Manuel dives down inter th' fo'csle an' brings th' cat under his arm.

"What in thunder are ye goin' to do with it?" I enquired.

"I take heem weeth me for companion," repied he as he leaped aboard.

The skipper an' th' cook, who were standing by, opens their eyes wide at the idea, but said nothing, and very soon we were heaving our gear—the cat asittin' in the stern of the dory an' blinkin' at us with his yaller eyes as intelligent-like as if he understood everything we were doin', Well boys, in all my fishin', I never had such a haul as we had that day. Fish struck on good, an' every hook had a big cod, cusk or haddock on to it. It was hard pullin', an, Manuel an' I relieved each other until one or the other was played out, then we'd take turn about at combin' an' coilin' th' gear until we were rested up for haulin' again. By th' time we'd reached the end line of the second tub—we set three tubs—the dory was well nigh full o' fish. As I was coilin', I thought of our good luck an' th' cat, an' turnin' my head I sees th' black devil in th' stern peerin' at me an' Manuel with his ugly yaller eyes half closed. He had a sorter sarcastic, sneerin' look on his face which kinder got me riled, so when my dory mate passes a big cusk that he couldn't slat off, I gives it a swing at the cat. Before ye c'd say "Knife!" the dory capsized an' hove us all inter th' water. I gave a yell, got a mouthful of salt water, an' as I couldn't swim, made some frantic grabs in the air, and went under. While I was groping around promiscuous-like, my fingers grasped a line which I found was attached to the trawl-buoy, and when I overhauled it a few feet, I managed to grasp the buoy itself and hangin' on to it, kept my head above

water. When I got my eyes clear of th' salt water an' recovered my wits, I saw th' dory about a couple of fathoms away, th' cat on top, and Manuel hangin' on to the plug strap an' cursin' that animal in Portygee. Th' water was perishin' cold an' my oilskins an' jacket seemed ter weight like lead, but in spite of my plight, I was conscious that the cat was talking back to Manuel the same as ef he was a human bein'!''

Mason paused for a moment and handed his pipe and plug over to one of the younger men. Without interrupting, the hint was taken and the old fisherman continued while his pipe was being filled.

''Luckily for us, th' vessel was joggin' close-to, an' th' skipper, seein' what had happened, let his jumbo draw an' bearin' down picked us up in a few minutes, cat an' all. Th' fish an' half the gear was lost along with th' gurdy, th' roller, an' th' waterjar. Well, boys, when I got on deck, I turned to an' cussed that tarnation cat until all was blue. I was firmly convinced that thro' some supernatural agency that animal had caused the capsizal of the dory because I pitched th' fish at it, an' I swore that I'd cut it's throat afore another hour was passed. Still rippin' mad, I went down inter th' foc'sle ter change, and there I sees that infernal animal sittin' by th' stove preenin' his wet fur an' glarin' up at me as ef he c'd eat me. Th' look in th' brute's eyes was so aggravatin' that I lifts up my boot for to heave at him, when Manuel makes an excited grab at my arm. 'No, no,' he almost screams in fear. Don't touch heem£' I holds back, as I sees that Manuel was scared stiff. I asks him why, but he shakes his head and waves his hands, Portygoosy fashion, an' almost begs me not to touch th' cat, while th' creature itself watched us with a sneerin' sarcastic smile on it's black face. I dropper th' boot an' started dressin' again, determined in my mind, ter find out more about th' mystery between Manuel and his cat at a very early date.

''When th' boys came aboard I had ter stand a lot o' chaffin' 'bout capsizin' th' dory, an' I knew it was no use ter tell them about th' cat or they'd say I was crazy, an' as none o' them would talk to Manuel, I had ter stand all their jawin'. That night was when Tommy Cantley got his, for blowin' smoke in th' cat's face, an' I was kinder pleased, as Cantley was th' biggest joker in th' foc'sle. I kin tell ye, he didn't joke much arter th' cat was finished with him, an' Manuel had a hard time ter prevent Cantley from pitchin' th' creature over the side.

''That night, Manuel and I stood an hour an' half watch at midnight, and as it was clear, we both paced the quarter—vessel joggin'. I had made up my mind to question Manuel, an' screwin' up my courage, I broached the subject on my mind. 'Say, looky here, Manuel. What th' sam-scratch is th' mystery about that darned cat o' yourn?'

''He looks sharp at me with them cat's eyes o' his, an' I thought he was goin' ter go fur me, so I backs up again th' house an' feels for a bait-knife stickin' in the cleat. 'Ma cat?' he says quietly. 'What about ma cat?'

'' 'Well,' I says, still holdin' on to the bait knife, 'there's somethin' mighty onusual about that animal. Blest if I ever heard a cat talkin' afore, an' yours certainly did—once when he scratched me in th' bunk th'-other night, an' on th' dory to-day. Ef ye don't enlighten me, I'll be hanged ef I ever go dory-mates with you again, an' what's more I'll tell th' gang——'

'' 'No, no, no,' he cries excitedly an' with evident fear. 'Don' do dat, or he'll kill me. I'll tell you—Wait!' With that he starts peerin' up an' down th' decks ter see ef th' cat was around, an' after satisfyin' himself, he comes an' sits down on th' house an' spins me a queer yarn. I can't give it to you th' same as he told me as he spoke in broken English an' did as much talkin' with his hands as with his mouth, but the substance o' it was this wise. He was a native o' th' Western Islands an' his name was not Costa. In his own country he had been a fisherman and owned a small boat of his own, running it in partnership with his cousin. Accordin' to his story they did very well an' got on well together until a woman heaves in sight, an' causes complications. Manuel said she was young an' very handsome, eyes like stars, olive skin and all the high class Portygoose style o' beauty. It appears that both fell in love with th' girl, but th' cousin was th' white-haired boy an' Manuel gets th' cold shake—a thing which don't go down well with a Portygee. For some months, this state of affairs continues, until Manuel gets mad with jealousy, and determines ter put th' rival ter his affections outer th' way. He gets a chance one night while they were out fishin', an' knockin' his cousin on th' head, he heaves him over th' side. Soon after he gave his cousin the last toss, he goes down inter the cabin for a nip o' Portygee courage, and spies a big black cat asquattin' there an' leerin' at him. Manuel tries to shoo it away ,but th' cat up and starts talkin' to Manuel in his own lingo. The cat tells him that he is the soul of th' murdered cousin, an' that he intended to stick to him for th' rest o' his days. After he got over his fright, Manuel tried to pitch the animal overboard, and fell overboard himself. He tried to poison it, an' while watchin' the cat eat the poisoned meat, he himself, took violently ill an' nearly died. Several ways he tried to dispose of it, but every method recoiled on himself in a similar manner. The cat then gets mad, an' tells Manuel that whatever was done to it by other would be done to Manuel, which explains why he stopped me from heavin' my boot at it. After givin' th' poor beggar a hot time in the Azores, Manuel slips away aboard of a vessel bound for New Bedford, only to find the cat shipmates with him. Coming to Gloucester, he ships aboard of fishin' vessels and has to carry th' cat along with him wherever he went. In one craft, I forgot th' name, he was run down in a fog and knocked into th' water unconscious, but th' cat hangs on to his head an' miaowed so loud that a boat's crew heard it an' picked Manuel an' th' cat up. The Gloucesterman said that he was a hoodoo an' he was forced to sail from Provincetown, an' from there he drifted into one o' th' Nova Scotia vessels—shippin' aboard o' th' 'Jessie Manson' of Anchorville. That was th' main parts o' his story, an' a dam' queer one it was. Somehow I pitied th' poor beggar, altho' he was a murderer. While he was standin' silent—awaitin' my comment, maybe—there was a dickens of a racket in th' foc'sle an' Tom Cantley comes up th' companion cursin' a blue streak an' draggin' th' cat up th' ladder with a bit o' line around it's neck. Manuel heard th' racket an' runs for'ard with th' speed o' fear, but he was too late to stop Cantley. Swingin' th' black cat over his head, Tommy heaves him over th' bows yellin', 'Thar' yet go, ye onlucky, scratchin' varmint. May ye drown quick!'

Manuel was past him like a flash, an' th' first thing we knew was that he was over th' side after th' cat. All hands came tumblin' up at my yell, an' we had th' dory over th' side in a flash, an' with torches alight pulled all over the sea lookin' for th' Portygee. For more than an hour we pulled around but never a sight o' him did we see. He must ha' gone down like a stone.

"Well, boys, we came aboard again to find poor Tom Cantley feelin' pretty bad, but kinder cheered him up when I told him that Manuel had confessed to me that he was a murder. I did not tell th' rest of th' yarn to th' fellers as I hated to be disbelieved an' laughed at an' besides I thought they'd be better not to know. Next day, it was a Sunday, opened clear an' with a smooth sea, so we baited up in th' mornin' an' made a late set with four tubs. It was a fine day for winter fishin'—a'most like September—an' we ran th' gear out in forty-five fathom. Jake Olsen went in the dory with me an' we made our set to the suth'ard o' Tom Cantley an' Johnny Monahan, an' started to haul early in the afternoon. I was at th' roller when I hears a shout from my dory-mate. Lookin' up I sees Cantley an' Monahan in number seven dory, pullin' like mad for th' vessel which was joggin' a mile or so to th' wind'ard of us, an' as they passed us I c'd see that Cantley was frightened. 'What's th' matter?' I hailed. Tom answers, 'Th' Portygee—th' cat—Th' Portygee an' th' cat—' Thinkin' that the incident o' th' previous night was playin' on Tom's mind, I went on haulin', an' comes alongside th' vessel about five o'clock with a miserable forty hake an' pollock. Tom was down in th' foc'sle, still frightened an' explainin' his action to th' boys. 'I was haulin' on th' first tub,' he says, 'an Johnny was coilin', when I feels a heavy drag on th' line. Shark in among th' gear! I says, but Johnny says "Halibut!" an' he stands by with th' gaff while I ships th' gurdy winch an' started to gurdy th' line in. All of a sudden, Johnny gives a shout, I stops gurdyin' an' looks over th' side o' th' dory, an' sees th' cat an' th' body o' th' Portygee snarled up in th' trawl. Their eyes were open an' starin' up at me as I looks over, an' I got sich a fright that I out with me knife an' cut th' gear. No more fishin' for me, boys. Never again will I go out in a dory, an' ef I ever git ashore again, 'tis Father Murphy that will get many candles for th' repose o' th' Portygee's soul.' As most o' ye know, he kept his word, an' went back to his farm, while I, in my case, have never had any use for cats after that." This concluding, the old man slipped off his suspenders, rolled up in his blanket and turned in, while the gang, thinking comment unnecessary, did likewise.

NEW OYSTER COMPANIES.

Among the latest applications to the Lieut.-Governor for incorporation by letters patent are two in regard to new oyster companies which are now being formed in Prince County. On is to be known as the "South West Malpeque Oyster Company, Limited." The proposed capital of each is $18,000, divided into 1,800 shares of $10 each, the chief place of business of both to be located in Summerside. The applicants for incorporation in the case of the first-named company who are also to be is provisional directors, are Dr. Alexander McNeill, Mr. J. S. Allen and Mr. A. C. Saunders, of Summerside, and Messrs. Robert and Joseph Barrett, farmers, of Lot Sixteen; while in the case of the South East Company are Dr. McNeill, Messrs. J. S. Allen and A. C. Saunders, of Summerside, Mr. A. E. Ings, of Charlottetown, Messrs Willis Kelly, Daniel Rayner and Talmage Montgomery, fishermen, of Traveller's Rest.

Mrs. Angler—Are you sure you caught this fish? Mr. A.—Sure! Mrs. A.—It smells very strong. Mr. A.—Strong! I should say it was. It nearly pulled me overboard!

Labrador Rules of Curing Cod

The Labrador Export Association, which includes practically every house in the trade interested in the buying and exportation of Labrador fish, have lately issued a circular to fishermen, in which they particularly ask all catchers and makers of Labrador fish, to use the utmost care in the preparation and cure of their cargoes. It is now generally recognized that a little extra attention paid to cure, always means considerably larger price for the fish, and that, therefore, it pays well to bestow a little more care in preparing fish for market. Here are the directions lately issued by the Association for the guidance of Labrador fishermen.

1st. Cut throat—When cut-throat is working he must run his knife a straight cut through the centre of the fish, passing through the vent to the end of the belly, he must not turn or twist his knife in any way.

2nd. Header—Must be certain that no liver or gut is attached to the inside of the fish. These create stains that depreciate its value.

3rd Splitter—You must split right to the end of tail. Keep the knife as near the back bone as possible, and not leave even one inch of round tail. the bone must be removed to end of sound, so that no blood clot will remain there.

4th Washing—Before the fish is dropped into the water, see that the blood has been scraped from the nape. Use clean seawater, and when removing the fish see that all blood and gurry have been washed off.

5th. Salting—For Labrador cure it needs very heavy salting and placed on evenly. At least 18hhds. of Cadiz salt, to the 100 quintals must be used. You cannot give this fish too much good clean salt. This fish should be left in salt bulk for at least 10 or 15 days to strike in properly.

6th. Washing out of salt bulk to be placed in water horse—The mopping in a puncheon or vat is not sufficient. Every individual fish must be handled separately and scrubbed with a brush or woolen mitt, both back as well as front. In mopping you remove only the salt, but the great difference between the white Iceland fish and the brown Labrador cure, when arriving at market, is that the Labrador fishermen do not wash off the slub or slime that gathers on the front as well as the back of the fish after it has remained in salt bulk.

7th. Shipping—Every care must be taken in handling, so that there is no torn or broken fish. Fish must be dried sufficiently to pass the Inspector.

8th. General—Keep your knives well sharpened, as the neat shape and good appearance, depend much upon being carefully split. All fish must be carefully handled from the time it is taken from the water till it is shipped. It is imperative that fish must be clean, properly split, and heavily salted. Unless these directions are attended to, the fish cannot be accepted at current prices. —St. John's, N. F., Trade Review.

LARGE LOBSTER.

When Captain Thomas Howatt, Cape Traverse, P.E.I. was fishing his nets for mackerel, much to his surprise he found a large and beautiful lobster, perfect in every way, weighing fifteen pounds.

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company.)

Trade is only fair and prices in general have a tendency to sag.

Large stock of frozen fish are waiting for contracts, and buyers not very eager to arrange for commitments.

Salt and Pickled fish are reported to be plentiful, and holders are looking for disposal.

Labrador Salmon is offered at very reasonable figures.ures. Codfish in all its shape and forms easy, and at relatively low prices.

Oyster trade so far has been very poor, due to unseasonably warm weather.

All lines of fresh fish are in good demand, in fair supply, and at reasonable prices.

Fresh Fish.

Mackerel	per lb.	.11
Gaspe Salmon	per lb.	.18
Halibut	per lb.	.12
Haddock	per lb.	.06
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Blue fish	per lb.	.12
Live Lobsters	per lb.	.30
Alewives, apiece	per lb.	.03
Whitefish	per lb.	.13
Pike	per lb.	.08
Perch	per lb.	.06
Bull heads	per lb.	.10

Canned Salmon

Red Sockeye Salmon, 4 doz. case	9.50
Red Cohoes Salmon, per cs. 4 doz.	7.00
Pink Salmon, per cs. 4 doz.	5.00
Pale Salmon, per cs. 4 doz.	4.25

Smoked Fish.

Haddies, per lb.	.08
Fillets	.11
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrings, box	1.10
Smoked Eels, per lb.	.12

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.14	.15
Salmon, Red—Steel heads, per lb.	.13	.14
Salmon, Red—Sockeyes, per lb.	.10	.11
Salmon, Red—Cohoes or Silvers, lb.	.09	.10
Salmon, Pale Qualla, dressed per lb.	.07½	.08
Halibut, white western, large and medium, per lb.		.10
ackerel, Bloater, per lb.	.07	.08

Frozen Fish—Lake and River.

White fish, large per lb.	.10	.11
White fish, small Tulibees per lb.	.06½	.07
Dore, dressed or round per lb.	.09	.10
Pike, dressed and headless. per lb.	.07	.07½
Pike, round per lb.	.06½	.07

Pickled Fish.

Salmon, Labrador, Tierces, 300 lbs.	19.00
Salmon, Labrador, Brls. 200 lbs.	14.00
Salmon, Labrador, Half Brls., 100 lb.	7.50
Salmon, B.C., Brls.	13.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	6.00
Herrings, Labrador, Half Brls.	3.25
Herrings, Nova Scotia, Brls	
Herrings, Nova Scotia, Half Brls.	
Quebec Sardines, Brls.	6.00
Quebec Sardines, Half Brls.	3.50
Scotch Herrings, imported, half brls.	8.50
Scotch Herrings, imported, kegs	1.35
Holland Herrings, imported milkers, half brls.	7.00
Holland Herrings, imported milkers, kegs	.80
Holland Herrings, mixed, half brls.	6.50
Holland Herrings, mixed, kegs	.75

Salt Fish.

No. 1 Green Cod, large Brl.	9.00
No. 1 Green Cod, medium, brls.	8.00
No. 1 Green Cod, small, brl.	7.00
No. 1 Green Cod, Haddock, medium, brl.	
No. 1 Green Cod, Haddock, small, brl.	6.00
No. 1 Green Cod, Pollock, medium, brl.	6.00
No. 1 Green Cod, Hake, medium, brl.	5.00
No. 1 Quebec Eels, large, per lb.	.04½

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	6.00
Dried Pollock, medium and large, 100 lb. bund.	5.50
Dressed or skinless Codfish, 100 lb. cases	7.00
Boneless Codfish, 2lb. blocks, 20 lb. boxes, per lb. .07	.08
Boneless Codfish, strips 30 lb. boxes.	.12
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.80
Boneless Codfish, in 2 lb. and 3 lb. boxes	.13

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysters, per barrel.	9.00
Malpeque shell oysters, selected, C.C.I., per barrel	12.00
Malpeque shell oysters, selected J.A.P., per barrel	10.00
Malpeque shell oysters, selected XXX, per barrel	9.00
Maalpeque shell oysters, ordinary, per barrel	8.00
Malpeque shell oysters, caraquets, per barrel	6.00
Clams, per barrel.	6.00
Mussels, per barrel	5.00
Live Lobsters, medium and large, per lb.	.30
Boiled Lobsters, medium and large, per lb.	.32
Lobsters—New Crop—1 lb. flat tins, per case	23.00
Lobsters—New Crop—½lb. flat tins, per case	23.50

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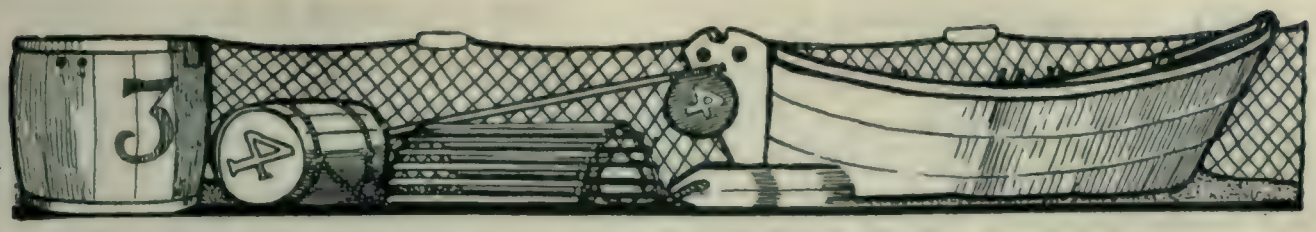


THE ATLANTIC FISHERIES

ST. JOHN, N. B.

(Special Correspondence).

Some good catches of sardines have been made in the harbor weirs recently. One weir was reported to have stocked $2,000 in three days. Only a few weirs are in operation. Boats from Maine and Charlotte county canneries have been here offering good prices.

Wholesale quotations at St. John follow:

Bloaters, boxes	0.85 to 0.90
Cod—	
Medium	6.00 to 6.25
Small	4.25 to 4.50
Finnan haddies	0.00 to 0.07
Herrings—	
Gr. Manan, bbls.	6.00 to 6.50
Kippered, boxes	0.00 to 0.80
Haddock	0.00 to 0.04
Halibut	0.00 to 0.12

"If St. John wants to establish a new industry its business men should take up the question of organizing a fleet of off-shore fishermen," said Lewis Conners, of Conners Brothers, Black's Barbor, recently.

"If I had any money to spare I would put it in off-shore fishing vessels," added Mr. Conners. "Digby has built up quite a fleet of off-shore fishermen and they have done well. According to reports, some of the Digby fishing vessels made big money last year: in fact some vessels stocked enough to pay for themselves during the winter. Where Digby has made a success there is no reason why St. John or say St. Andrews should not. Some years ago St. John had a few fishing vessels, but they were rather small, and probably did not do very well, as their operations were confined to the Bay of Fundy. What is needed to carry on the fishing business on a successful basis are vessels of from 100 to 150 tons, capable of working on the banks on the southern coast of Nova Scotia in the winter time. Most of the American vessels make their winter catches on the lesser banks lying off the coast of Nova Scotia. The Digby vessels also make their catches on Browns, Lahave and Cape Sable banks.

"Vessels can be built in this country as cheaply as in Gloucester, and there should be no difficulty in manning them. Many of the best skippers running fishing vessels out of Gloucester or Boston were at one time fishing out of New Brunswick ports on the Bay of Fundy or from Nova Scotia.

"Today there is a big market for fish in Canada, at certain seasons of the year some of the fish dealers in St. John have to import fish from the States, paying duty on their consignments. This a condition we should strive to abolish. Vessels running from the Banks on the south shore of Nova Scotia can reach St. John almost as quickly as they can get into Digby and from here to the big markets of Montreal and Toronto is a shorter haul than from Digby. St. John would be a fishing port of considerable importance, but it will not be so until the local fish dealers wake up to their opportunities."

The sardine fishermen of St. John and the Bay of Fundy have been enjoying a great season. Prices have been ranging from $16 to $24 a hogshead.

A Charlotte County weir owner is reported $50,000 in pocket as a result of the sardine run to date. A local man disposed of sixty hogshead at $20 last week.

CANSO, N. S.

(Special Correspondence)

About the first of August the swordfish season began on this coast. They were hardly as plentiful during the early part of the month as they were last year and were reported to be rather shy but since then the landings have been increased and at time of writing large numbers are being brought in. Some of the larger boats go quite a distance along the coast—off Louisburg for instance—to round up their catches, returning with anywhere from eight to over a dozen. The price to the fishermen here has ranged from six to four cents but a number of the men ship their own fish direct to the American market, benefiting considerably thereby.

On August 3rd, the steam trawler Reynard, from Grimsby arrived in port after calling at Sydney, on her way. She landed about 140,000 pounds of fish at the Maritime Fish Company's plant and has since made several trips. Captain Olsen, who was out here on the Caulonia last year, is the captain of the new boat.

In ordinary times, fish is the chief topic of discusison in Canso but the war since its sudden outbreak, has pushed every other subject more or less in the background. Canso, itself, as a seaport and chief Atlantic cable station has been taking on during the month a very war-like aspect. A squad of soldiers, including both infantry and artillerymen and composed of both regulars and militia, are stationed here. Earthworks are being thrown up and two 4.7 guns have been mounted in readiness for the unexpected but possible arrival of enemies. Much speculation has been going on as to the probable effect of the war on the Country's fishing industry. It was rumored early in the month that the firms here might have to discontinue buying but such a calamity has not yet occured and there really seems no sound reason for such fears, at least until the British fleet has been put out of business. It is true that the local buying price of steak cod has dropped from 2.00 to 1.25 per cwt. and cod and haddock from 1.25 to 1.00, but the local men are inclined to attribute this decline to other causes than the war.

A meeting of the Canso Regetta Club was announced for the latter part of July, for the purpose of making arrangements for the holding of the annual regetta. In view of the war trouble and the disturbed condi-

tion of things both generally and locally which have followed as a result, the matter, by common consent, has been allowed to drop. In fact, it is almost certain that no regetta will come off this year. If such proves to be the case, it will be the first break in the series since the institution of our local yearly sporting day—just thirty years ago. Although it is certainly true that the fishing boat races have lost most of their charm from a spectator's view point, since the coming into use of the motors, yet the day as a whole is always looked forward to with interest by the townsfolk (especially the children) as a holiday having a special local flavor of its own.

A large number of Lunenburg bankers from the Newfoundland trip have made port during the past fortnight. In general, they report very poor fishing.

Small quantities of squid have been taken in some of the local trips, but no catches of any bulk worth while have yet been made.

DIGBY, N.S.

(Special Correspondence.)

Schooner Dorothy M. Smart, Capt. William Snow, has been in port with a first trip of 85,000 lbs. of Cape Shore fish.

Schooner Quickstep at D. Sproule and Co.'s wharf has received a new bowsprit, new mainmast and a general overhauling. She will also engage in fall haddock fishery. Her former commander, Capt. Arthur Casey, is now in charge of the Lila G. Boutilier, Digby County's latest addition to the fishing fleet. The Lila G. Boutilier was formerly the American schooner Theodore Roosevelt which went ashore last winter at Trout Cove, and was afterwards purchased by A. Boutilier, of Centreville, and Samuel Gidney, of Mink Cove. She has since been made as good as new and is now one of the best vessels sailing out of this port. Her first few fares will be landed in the United States, but when Digby prices advance during the finnan haddie season she will land her cargoes here.

Dredges Iroquois and Beacon Bar, which have been dredging in the harbor and also deepening the Racquette during the present month, returned to St. John last week together with the tugs, Lord Kitchener, Lord Beresford and Lord Wolsley, taking with them the scows and entire plant.

The St. Andrews auxiliary schooner Mary M. Lord, Cept. Johnson, with 30,000 lbs. of fish for the Nova Scotia Fish Co., which went ashore on the east side of the Gut, August 18th, was successfully floated, and proceeded to Digby under her own power, having been but slightly damaged.

The following are the fish receipts at this port reported by the wholesale fish firms for the month of August: Maritime Fish Corporation, 53,920 lbs. of cod, 59,084 lbs. of haddock, 300,274 lbs. of hake; Joseph E. Snow, 39,638 lbs. of mixed fish, 17,921 lbs. of hake, 3,760 lbs. of cod; D. Sproule and Co., 23,600 lbs. of mixed fish, 25 quintals dry fish, 3,000 lbs. of pickled fish.

The following vessels are now fishing out of this port: Schooners "Albert J. Lutz," Capt. John Apt; "Quickstep," Capt. Arthur Longmire; "Dorothy M. Smart," Capt. William Snow; "Dorothy G. Snow," Capt. Ansel Snow; "Loran B. Snow," Capt. Roy Longmire; "Lila G. Boutilier," Capt. Arthur Casey.

NEW SCHOONERS AT SHELBURNE.

Another new schooner was successfully launched recently from the Joseph McGill shipyard at Shelburne. She is of the semi-knockabout type, and was designed for the salt banking fisheries. She registers 93 tons. She was built under contract for George A. Bartlett, of Burin, Nfld., and is the fourth new vessel to be put afloat from the McGill yard this year.

In the same shipyard another fishing schooner is in course of construction for parties at LaHave.

GREAT CATCH OF HERRING AT YARMOUTH, N.S.

Yarmouth, September 15. — The fall fish have started in. Yesterday there was a phenomenal catch of herring at Sundy Point, and today the boats have made fair catch of haddock. Dog fish, which have been such a pest on the ground for some months have not entirely disappeared but they are falling off in numbers. What dog fish there are now, are in small and distinct schools. This is shown by the work of two boats today; they were fishing a short distance apart, one joining berths and hit a short distance apart, one succeeded in getting a splendid fare of haddock, the other only landed eight or nine fish, the dog fish having demolished the others. Yesterday herring were in such quantities off Sunday Point that many of the nets were sunk and had to be grappled for. Thousands of barrels were taken. Other fish arrivals today have been the Schooner Edith F. S., with 40,000 pounds, the Nelson A., with 30,000 pounds and the Eddie James with 25 000 pounds, the last fare being fresh.

HELIGOLAND GOOD LOBSTER FISHING CENTRE.

Heligoland, under whose fortifications the German fleet is sheltering, says the Fishing News, was once the religious centre of the Frisian race. Heligoland, or Heligoland, as the Germans call it, means the Holy Isle. From 1803 to 1890 it was a possession of Great Britain. In the latter year it was ceded to Germany in exchange for a portion of German East Africa. It is questionable nowadays whether John Bull got the best of the deal. The island is quite small, being only three-quarters of a mile square, with a high rocky cliff on one side, sloping down to a sandy beach. It is very sparsely populated—at least it was so when I visited it in its second year under German rule.

Times have changed since these days, and the island has become one of the Kaiser's many strongly fortified citadels. The fortress will likely be an important factor in the present war, as the great range of its powerful guns dominates the approach to the mouth of the Elbe, from whose entrance it is 40 miles distant. It is the "key to the Kiel Canal," 50 miles off, and a defence for the great shipping port of Hamburg, 125 miles away.

By the way, the islanders carry on a large and lucrative lobster fishing, or rather I should say did, for on the outbreak of hostilities all the civil population of the island were promptly transported to Hamburg, where, I understand, they arrived on August 4. The lobsters of Heligoland are therefore enjoying an unexpected rest cure. Thanks to the efforts of the British Navy, they are having what may be termed a "close time," in which German Dreadnoughts are evidently thankfully participating.

THE PACIFIC FISHERIES

GENERAL NOTES.

Smoked Fish.

With plenty of the raw article to work on, curers are now producing the usual varieties marketed here. Smoked fish is becomming more and more a favorite form of fish with the householder. It may be that this age calls for the least work possible; or to put it better, a tasty article quickly prepared for the table, is always welcomed. Smoked fish calls for very little work on the part of the cook of the household. This applies especially in the West where domestic help is more or less only to be obtained at fancy wages. Curers are making a point of kippering for practically immediate use almost every variety of fish that can be cured this way.

With the increased transportation facilities our Eastern Canadian friends will shortly only have to taste the goods to demand them. Then the better they like our smoked fish the merrier.

Salmon.

Where one man loses another gains, else trade would be inclined to be without its ups and downs. This war business in Europe has effected the canned salmon business very materially and to the gain of the packers. The same causes are responsible for the loss to the mild cured salmon packers. This latter pack goes almost entirely to Germany. The goods are cured just enough to allow them to go across to the Atlantic terminals in refrigerator cars, and thence to Germany in the Steamers' cold storage. On arrival, the fish is treated by the curers in Europe, and goods turned out from the mild cured salmon just as if they were made from the fresh fish.

The war has resulted in a complete glut on the Pacific. On the Sound alone it is estimated that there are over 2,500 tierces of 800 lbs. net each. In British Columbia about three packers put up this class of goods this season, and had their packs sold some time before the actual operations started. As money from Germany is about the hardest thing to obtain these days the bulk of the pack is on their hands. The New York markets take a few tierces, but not sufficient to relieve the situation to any appreciable extent. There were a few enquiries in Seattle lately, but they only seemed to be feelers for bargains.

CANNED SALMON:

Sockeyes—Talls	$ 8.00
Sockeyes—Flats	8.75
Sockeyes—Half Flats	10.25
Cohoes—Talls	4.75
Cohoes—Flats	6.25
Pinks—Talls	3.50
Pinks—Flats	3.50

There seems to be just as many enquiries for canned salmon, as ever. In fact canners are said to be packing every salmon that they can get hold of and the demand is away ahead of the supply. I need not go into details about the food properties of canned salmon, except that to say that stocks of this in every household is a great standby. The same applies to all canned fish.

The Sockeye run was delayed and at that considerably smaller than estimated. Those fortunate enough to be able to get a supply of Sockeyes from the small catches brought in, may well wear a smile. The Alaskan pack is far short of the expected, and some canneries were trusting that we might be able to supply them.

Every case of canned has a market today. The carry over cannot be large next year, so prices are not inclined to drop. Canners were offering fancy prices for the fresh fish, and this induced the fishermen to stay out on the ground long after the usual time. Then the fog of the past few weeks also was a factor in interfering with all fishing operations. The Banks of Newfoundland would be given valuable lessons in the thickness and persistance of fog around these waters this year. But this is unusual of course.

Fresh Salmon.

The wholesale markets are fairly well supplied but there are no low prices ruling like last year. Red Springs are always to be obtained seemingly, and also White Springs. Of late years quite a trade has developed in supplying the large American dealers with the latter for smoking and kippering purposes.

Herring.

Our point Greys are about at their prime. These fish do not run to length like the large Nova Scotian fish, but for quality and body, the Point Grey herring will hold their own anywhere. It is now a foregone conclusion that a few years will see herring packed here on a very large scale. The experimental work has involved large expenditure and apparent losses financially. But like in every other business pioneer work rarely brings fortunes to the pioneer.

The end of the present month will see most of the salteries busy with the small herring for the Oriental market. The crude method of curing results in goods that could only sell in a congested and cheap market like China. Some of the Japanese packers are not in operation this season, as prices obtained last year were very low. They also have an idea that the trade conditions will seriously interfere with business. To date freight rates have not advanced and China will want all the cheap food she can get. It may be that if the pack is short purposely, that prices will be better.

Codfish.

Whilst the impression in Canada is that the Atlantic Ocean has all the codfish, still it is just as well to tell some people that the Pacific has lots of it also. The species may not be exactly the same from climatic and water conditions. But we have more varieties. The local trade will take care of all that is brought in. The consumption is only in the fresh state, except for the Black Cod which is cured in pickled and also is smoked.

Our American neighbours have quite a large codfish trade, the fish coming from Alaskan waters. Large vessels are sent out in the same manner as the Atlantic "bankers," early in the summer. The catches are quite large as a rule showing the indications of good grounds. The packers put the fish up into many forms of the Boneless Codfish, and ship quite a quantity through to the Atlantic. Some of this returns as Atlantic Boneless Codfish, and deceives the particular but unwily housewife.

Halibut.

It is now clearly understood that for the coming season at least, the low prices ruling last year, are a thing of the past. The arrivals have been considerably less than previously. The impression ruling with the trade is that frozen halibut will be a good price. Some packers are even under the impression that they will pull out ahead on their carry overs. It is just as well to have fish at a decent price, for then everybody has a chance. Cheap fish at this end does not by any means indicate cheap fish to the actual consumer. The fisherman is about the only man not affected by prices, as he gets his 1 1-2 c. per pound irrespective of any rises and slumps.

A New Association.

The British Columbia Wholesale Fish Dealers' Association has been formed for the purpose of the general improvement of the industry. The objects are as follows:

To improve working conditions of the industry.

To encourage white labor both for the catching and handling of the product.

To promote and to encourage the best economic methods for the producing and distribution of fish.

To further any movements that will tend to the betterment of the industry.

The association has the good will of all fish handlers and every wholesale fish dealer in the neighborhood is a member. The officers are:

President—G. St. Denis, Can. Fish and Cold Storage Company Limited.
1st Vice-President—M. Monk, M. Monk and Company.
2nd Vice-President—R. R. Payne, Canadian Fish Company, Limited.
Treasurer—U. Urquhart, Standard Fisheries Limited.
Secretary—V. F. Johncox, London Fish Company.

With these men at the head of the new association, success along the lines indicated is assured. It is not the object of the association to control or regulate prices in any way.

The association is in communication with the Dominion Government through Dr. F. T. Underhill, Vancouver's medical officer of health. It is proposed to acquire a site and erect on the same a Central Fish Market. In this market are to be housed all the wholesale fish dealers of Vancouver, and the market is to be housed all the wholesale fish dealers of Vancouver, and the market is to be under careful inspection. In the January issue of the CANADIAN FISHERMAN, this idea was entered into in detail.

Personal.

Mr. F. E. Payson has severed his connection with the Dominion Fish Company, Limited, and is at present North in the interests of the B. C. Packers Association.

Mr. A. L. Hager of the Canadian Fish Company, Limited spent some time last month in the North looking over the various plants and interests of his company.

The business lately conducted by the Dominion Fish Company Limited is now being operated by the Messrs. Neville Bros. These men have had considerable experience in the "fish game" of Vancouver, and should command a fair share of the trade.

Mr. F. J. Hayward late of Hayward, McBain Company, Limited has opened up an office in Vancouver as a fish broker. He was a passenger on the "Princess Victoria" when she sank the "Admiral Samson" a few miles from Seattle a week ago. But for the action of Capt. Hickey of the "Victoria" many lives would have been lost. It may be mentioned that Capt. Hickey acted up to all the traditions of the country of his birth, Newfoundland. His early training was on the Atlantic, and no other ocean can breed such men.

As far as this Province of British Columbia is concerned, we do not notice any marked effect of the European upset. It has resulted in a certain extent to getting business on a more safe basis, and cutting out "getting business at any price." If there is one branch of industry where credits have to be watched even more closely than others, it is the fish business. Buyers have to lay out good cash in return for the raw material, and then are at the mercy of the trade and its variations. Forethought, and to be continually "on the job" are essential. On top of this the least credit allowed the better. Indiscriminate credit leads also to price cutting. These two evils work handing love with each other, and either can use bankruptcy quicker than any other cause. Where care has to be taken over money matters in times such as these, the public is inclined to pay its way much more than in "boom" times.

Many trade papers have taken up cudgels on behalf of the "Middle man," and many citizens in both Canada and the United States, write to their favorite papers concerning the uselessness of this same middle man. But it is the "middle man" in almost every case that gets "stuck." He has to pay the producer good hard cash as a rule, and then give the retailer time and in many cases discounts. I shall not discuss this matter further, except to say that there are many businesses that could not flourish without the much abused middle man. To no other trade does this apply so much as to the wholesale fish merchant. He is about the most hardened sinner according to both the producer and retailer. But his reward will come in time, and until such time does come, he can only go along and watch his credits. Times such as these give him a fighting chance. He is in a position to insist upon better payments, and thus get what is only due to him. He no longer has to finance both the producer and retailer.

There have been undoubtedly many mistakes made in this part of the world in the past. Mistakes cost money, and much of this has been wasted in the fisheries of this Province. In many cases where there has been a legitimate desire to further the industry, and not to sell land only, the causes for the failure to make good have been mostly ignorance of the fundamentals of the trade by those at the head. Antiquated regulations, failure to watch other markets, and especially to

seize special opportunities have all played their part. But we all know that the real inventor rarely gets the benefit of his discoveries. Those who follow his ideas out and adapt them to make them marketable, get the kudos in every case. To a certain extent this is what B.C. has been going through. She has accepted statements by political seekers which in the main are correct, but have in many cases still to be proved.

We in this part of Canada have it drummed into us by politicians and the newspapers, that we have an inexhaustable source of revenue in our fisheries. We have them as is proved by the canned salmon and halibut industries. These latter have been developed to such an extent that we have the lead over any other country in the operation of these two industries. Of course, it is here understood that the Puget Sound and Alaskan fisheries are included in the above statement.

We read an interview almost daily showing how such and such a person is convinced that our fisheries are to be the largest in the world. We are told that our herring is an untold source of wealth; that our cod and ground fish will make many fortunes here. To tell the truth we all know this. But what we want to know is that these sources of wealth are being developed. We do not want to read about some large company being formed that is going to do "the devil and all. We want to hear about the goods that this new company is packing and shipping in return for the fishing rights it has secured from the authorities. There have been too many such companies inaugurated with great fanfares of self-blown trumpets. They have tied up too many good fishing rights and blocked bona fide seekers from getting the same. I do not blame the authorities responsible for the granting of fishing privileges. As far as they are concerned, they understand that these rights are being sought with all intentions to make proper use of the same. They cannot help rights being secured and the same held on to when somebody wishing to operate right away could make good use of the same. Development and legislation will in time insist upon such rights being availed of within a specified period.

This time last year the writer was foregathered with the merry company at Toronto Exhibition. We shall be interested to hear how this passed off this year. It has been suggested that a list of newspapers published throughout the whole of Canada be secured, and these papers be given full details of this Fisheries Exhibit. This would be neither costly nor arduous. The papers would be only too pleased to take up such a campaign ,and assist the Department in its work of showing the Canadian public what benefits are to be derived from eating fish.

Since writing the reports for the present issue of the CANADIAN FISHERMAN I have been informed that it is proposed to issue a combination number for September-October. Naturally prices and conditions will have altered in many cases.

Halibut still continues to be scarce, and this will tend to put the price back to its proper basis, as much as anything. Salmon in all its grades are about the same. Not much frozen stock is being packed unless contracted for. Packers feel that this is not a year to speculate. The unusual is happening, and canners are putting up the "qualla" salmon. The run of pinks was away short all over the coast from Alaska downwards.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by the London Fish Co.)

Smoked Fish.

Finnan Haddies, Atlantic 15s. and 30s.	.09
Fillets do.	.10
Bloaters, Local	.06
Kippers, Local	.06
Salmon	.10
Halibut	.11
Cod	.09
Kippered Salmon	0.11
Kippered Halibut	.12
Kippered Black Cod	.12

Frozen Fish.

Salmon	——
Cod	.05
Halibut Chicken and Medium	.06
Smelts	.05
Soles	.05
Flounders	.03
Perch	.08
Herring	.03
Black Cod Alaskan	.08
Mackerel Eastern Shore	.12
Shad Roe .20 per pair	——
Whiting	.03

Fresh Fish.

Salmon Cohoes	0.5
Salmon Qualla	.04
Salmon Humps (Pinks)	.03
Salmon Red Spring	.08
Halibut	.06
Cod	.05
Smelts	.05
Herring	.03
Soles	0.5
Whiting	.06
Skate	.03
Perch	.06
Rock Cod	.05
Red Cod	.03
Sea Bass	.06
Black Cod	.08
Shad, Columbia River	.08
Sturgeon, Round	.10
Sturgeon, Dressed	.16

Pickled Fish.

Salmon (Sides)	.10
Salmon (Bellies	——
Alaskan Black Cod	.08
Whole Cod Pacific	.07
Herring, Local	.05
Herring, Large Eastern	.05

Prepared Fish.

Boneless Acadia 2lb. boxes	.14
Boneless Acadia Strips	.13½
Boneless Acadia Tablets	.14
Boneless Bluenose No. 2 bricks	.09½
Boneless Pilot No. 2 bricks	.08½
Boneless Nova Scotia Turkey No. 2	.07½
Boneless Pacific	.08½

Shell Fish.

Deep Sea Crabs (Boundry Bay) per doz. 1.00-1.20	——
Shrimps	.08-15
Prawns .15-25	——
Clams	.02
Clams shelled ..per gal. 1.25	——

LOBSTER EXPORT TO EUROPE AT A STANDSTILL.

The export of lobsters from Canada to Europe is at a standstill; there is no business doing. Fortunately about half the maritime provinces pack of the present season had already gone forward, and is being held in strong hands on the other side. What stock is here, speaking generally, is equally strongly held, so the trade are inclined to think that there is not likely to be a break in prices so far as the Canadian pack is concerned. The situation in Newfoundland, however, finds its market largely in Germany and the small packers there on the advice of the Fishermen's Union held out for $25 per case, with the result that a great many small packers are left with their stock and the German market gone entirely. It would be difficult to secure a bid from any lobster buyer here to-day, and any that was offered would naturally be of a speculative character. The feeling we gather from talking with the trade is that the outlook for next year is not at all satisfactory, but no doubt that will largely depend on the war's duration and the purchasing capacity of continental people during the second half of 1915.—Maritime Merchant.

Messrs. F. Croft and H. Swaby, Grimsby, have been granted a patent for their new process of drying fish. The fish are dried on balks, beams, trays, wheeled frames, etc., in a chamber supplied, through a conical or other passage containing a fan, with air heated by hot water tubes forming radiators in an air receiving house. The air conduit passes through the engine house, in which is an engine driving the fan or fans. The hot water tubes are arranged in four sets of radiators supplied from a boiler in the air-reciving house through flow and return pipes. The opening of the air-inlet door is covered with a sheet of gauze, which may be covered with calcium chloride, another sheet may be situated between the first sheet and the radiators. Air may also enter through a louvered opening in the roof of the house, or if the fan breaks down may escape therefrom without over-heating the fish. In a modification the radiators may be supplied with water used to cool the engine.

AMERICAN OYSTER STATISTICS.

Britain Prefers Home-Grown Oysters.

In the reports for the year 1913 of the trade of the Consular District of Baltimore, U.S.A., the following appears:—

It is stated that the best oysters in the United States are produced in the warm waters of the Southern States of North America, where colder fresh waters from northern latitudes are brought down by rivers. In this way the oysters get the benefit of a change of climate without moving from the locality where they are spawned. These conditions appear to be fully met in the Chesapeake Bay, the neighboring coast of Maryland and Virginia and in the Gulf of Mexico into which the cold waters of the Mississippi river flow. The Gulf (Louisiana) oysters are fast getting a high reputation, and in consequence 4,504,402 bushels were sold in 1912, compared with Maryland's 5,510,421 bushels and Virginia's 6,206,402 bushels. The quantity produced in all the Southern States in 1912 was 19,643,658 bushels valued at 6,255,249. It will serve to indicate the importance of the industry in the Southern States to state that the value of the boats, apparatus and other property connected with it is given at $9,165,077, and that 53,556 persons are engaged in it.

The method of oyster culture in the Chesapeake Bay appears to be very simple. Oyster shells are thrown into 15 or 20 feet of water in the open bay having a mud bottom. Then young oysters are thrown in and attach themselves to the old shells, where they are allowed to grow.

It would seem that the demand for the American oyster is greatly losing ground in the United Kingdom. The average yearly value for a number of years of the exports was about $700,000 until 1912, when the quantity purchased in the United Kingdom fell off to $163,100; Canada, however, took in that year $375,355 worth but even with that the average yearly exports were not reached. Something over a decade ago 2,000 barrels of oysters were sold every week in London, while now not more than 100 barrels are sold. The cause of the decline is attributed to the preference of the British for the home-grown oysters and to the fact that they are cheaper.

A SUITABLE CONTRIBUTION.

Each Province of this Dominion is sending to Great Britain a gift representative of its principle industry, in the food line. That this is a happy idea cannot be disputed, and the gifts will be appreciated by the authorities in the Mother Country. Whilst there is practically no idea of advertising suggested in these gifts, but only an outward form of appreciation and loyalty; still, the size of the gifts will go a very long way towards dissolving the uneasiness that was growing amongst certain elements in England. What Canada has, she will give, both of her men and resources.

British Columbia has decided to send 25,000 cases of her canned salmon. Taking the pound tins at 48 to the case, this means 1,200,000 tins, and this is no small gift if one will take into consideration the size of the pack this year, and the high prices that the canners have offered them. If this gift be for the troops, no better one could be offered. In a tin of salmon there is far more nourishment than the public is aware of. Added to the nourishment contained in these 25,000 cases, is the handiness of the packages. War these days means rapid transportation, and so all supplies have to be packed in such a way to permit them being moved with all speed and least labor possible.

One is very glad that the fishing industry is so well represented in the Dominion's gifts to the Motherland. We all feel proud that we can offer something from the industry we are interested in. Our fishermen are at the disposal of the navy, and now their products will assist to feed the countries we are assisting.

EAT MORE FISH.

Whatever else may be said regarding the causes of high meat prices, we believe it cannot be denied that the consumption of meat per capita in the United States and Canada has increased beyond all reason during the present generation. This per capita consumption, it would seem, should be and can be greatly reduced by increased per capita consumption of fish, thus establishing a balance and a standard of living cost more satisfactory to the mass of the people, perhaps, than any likely to be reached through legislative or other methods so long as an unreasoning demand for meat unduly inflates the price of that product.—(Christian Science Monitor.)

STEAM TRAWLER TAKES BIG FARE.

The North Sydney Herald says: "All records, so far as known, in taking fish by steam trawlers, was broken when the Irish trawler Andromanche arrived at Vooght Bros. wharf, North Sydney, N. S., recently, with one hundred and ten tons of fish.

This vast quantity was taken in less than ten days, as the trawler was exactly ten days out from the time she arrived—both days inclusive.

As was stated several weeks ago, when the Andromanche made her maiden trip to this port, a fact which inaugurated the first trip of an Irish trawler to these waters, the great natural inducements offered by the port of North Sydney as a base for operations, the owners of the trawler, Messrs. Buckworth and Mumbry, Limited, with headquarters at Dublin, Ireland, have through their representative, Mr. Dunne, decided to locate in this town next year, when they will give employment to some 300 people.

The one hundred and ten tons of fish taken is now being unloaded by a gang of men and will be placed on board the barkentine Helen James, which arrived here a short time ago in ballast from Bermuda. When loaded the cargo will be sent direct to Dublin, Ireland, and it is quite likely another load will be shipped in a similar manner this Fall, providing the Andromanche meets with success such as has attended her trips to the Banks since coming to these waters.

In addition to the one hundred and ten ton catch made last week, the Helen James will also carry 70 tons stored in the warehouse, which was caught by the Andromanche on her maiden trip.

INSURING BRITISH FISHING VESSELS.

The British Board of Trade have arranged with an association representing the owners of steam fishing vessels a scheme of State insurance which will, it is hoped, enable such vessels to pursue their occupation and maintain the supply of fish for the consumption of the population. The arrangement provides that, in return for a small premium, the King's enemy risks to the vessels will be covered for a period of three months, the risks being shared between the State and the association in the proportion of 80 to 20 per cent. Generally speaking, the scheme is based upon that already in force in regard to merchant steamships, with the necessary adaptations to meet the circumstances of the fishing industry. Steam liners and drifters will be covered, as well as trawlers, provided they are insured in the association.

TO PRESERVE FISH.

A method has recently been introduced in Halifax, Nova Scotia, which promises to revolutionize the fish industr y wherever carried on to any considerable extent. This process is based upon the theory that putrefaction of fish is first caused by bone taint, due to the fact that in the old methods of curing fish the specific or animal heat is partially left within the fish. The new method which has been introduced, acts as a preventative to bone taint, completely removing the specific or animal head from the fish to be cured. Instead of salting, sun-drying, or shipping the fish on ice or refrigerating cars, the fish are dumped into a tank holding sea water which has been filtered through four cylinder-like tanks containing willow charcoal and screens to remove the noxious gases and foreign substances. Next, brown sugar is placed in the tank holding the fish to serve as a germicide for such organisms as may be active at freezing temperature. Then by refrigeration the temperature is lowered to 10 deg. cent., below zero, during which time 16.1 per cent. salt is added to prevent ice formation and to assist the formation of a thin protective coating over the fish themselves. Having allowed the fish to remain in this treatment, removed from the tank, and placed in the package or barrel to await transportation to market.

—Rod and Gun.

0 0 0

Department of Marine and Fisheries

LOBSTER FISHERY FISHING SEASONS
IN FORCE ON DECEMBER 1st, 1913

Number of District	LIMITS	Fishing Season	Size
1	St. John and Charlotte Counties, N.B.	Nov. 15 to June 15	4¼" carapace
2	Albert County, N.B. and Kings and Annapolis Counties, N.S.	Jan. 15 to June 29	No size limit.
3	Digby County	Jan. 6 to June 15	No size limit.
4	Yarmouth, Shelburne, Queens, Lunenburg, and that portion of Halifax County West of a line running S.S.E. from St. George's Island, Halifax Harbour, and coinciding with Fairway buoys	Dec. 15 to May 30	No size limit.
5	From line in Halifax Harbour running S.S.E. from St. George's Island, and coinciding with Fairway buoys, eastwardly to Red Point, between Martin Point and Point Michaud, Cape Breton Island and including the Gut of Canso, as far as a line passing from Flat Point, Inverness County to the Lighthouse in Antigonish County opposite	April 1 to June 30	No size limit.
6	From Red Point, between Martin Point and Point Michaud, along the eastern coast of Cape Breton Island, around Cape North as far as Cape St. Lawrence; also the north shore of the Gulf of St. Lawrence from and including Blanc Sablon, westwardly to the head of tide, embracing the shores of the adjacent islands, including Anticosti Island	May 1st to July 31	No size limit.
7	The Magdalen Islands, including Bird Rocks and Bryon Island	May 1st to July 20	No size limit.
8	Waters of Northumberland Strait, between a line on the N. W. drawn from Chockfish River, N.B., to West Pt., P.E.I., and a line on the S.E. drawn from Indian Point, near Cape Tormentine, N.B., to Cape Traverse, P.E.I.	May 25 to Aug. 10	No size limit.
9	The waters around P. E. Island except those specified in No. 8	April 26 to July 10	No size limit.
10	From, but not including, Cape St. Lawrence, Cape Breton Islands, south-westwardly to Flat Point, Inverness County, and from the Lighthouse in Antigonish County opposite Flat Point, westwardly along the strait of Northumberland and coast of Nova Scotia to Indian Point, near Cape Tormentine, N.B., and northwardly from Chockfish River, N.B., embracing the coast and waters of a portion of Kent County and of Northumberland, Gloucester, Restigouche Counties, N.B., and the coast and waters thereof of the Counties of Quebec, south of the St. Lawrence River	April 20 to July 10	No size limit.

Soft shell or berried lobsters must be liberated alive by the person catching them.

Lobster traps may not be set in 2 fathoms of water or less.

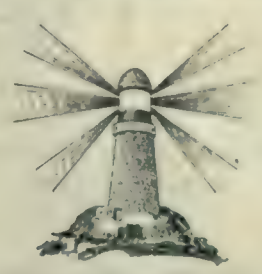
Lobsters to be canned may be boiled only in the cannery in which they are to be packed. The sale or purchase of broken lobster meat or fragments of lobsters for canning is prohibited.

Before lobster canning is engaged in, a license from the Department of Marine and Fisheries is required.

Canned lobsters must be regularly labelled or a permit obtained from the Department, before they may be removed from the cannery, and must be labelled before being placed on the markets.

Lobster canneries must comply with the Standard of Requirements, copies of which may be obtained from the local Fishery Officers or the Department.

SAFETY FIRST



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On all unleased Crown Lands and Waters, angling and hunting are absolutely free to residents of the Province, and the only charge to non-residents is the cost of the non-resident fishing or hunting license

To The Wholesale Fish Trade

The attention of dealers who receive their fresh fish from Portland and other foreign sources is directed to the exceptional opportunities of obtaining their supply from the Baie des Chaleurs and the North Shore of the St. Lawrence, to their own advantage and that of their customers, and to the benefit of the fishermen of the Province of Quebec.

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MINES AND FISHERIES OF THE PROVINCE OF QUEBEC

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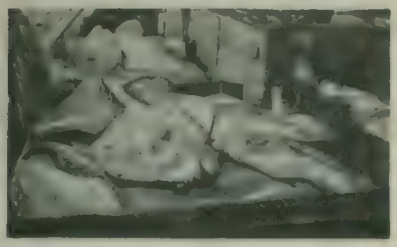

CANADIAN FISHERMAN

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 912 DOMINION BUILDING.

Published on the 24th day of each month. Changes of advertisements should be in the publisher's hands ten days before that date Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.
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Vol. I. MONTREAL, NOVEMBER, 1914 No. 11

Fish as a Factor in Reducing Living Expenses

The following appeared in the Montreal "Journal of Commerce":—

Canada has had her Commissions investigating the present high cost of food stuffs, but as is often the case with such investigatory bodies their recommendations and reports are published so far in the future that their very existence is forgotten by the time it comes out.

The European War has accentuated the prices of many commodities, and many people of the poorer classes find it hard sledding to make both ends of the board bill meet. They complain of the high prices of food stuffs, and at the same time make no change in their daily mode of living, nor any effort to find out whereby living expenses can be reduced. In response to this cry some months ago, the High Cost of Living Commission was appointed; made some investigations on the lines of a Star Chamber, and then incontinently vanished into obscurity.

However, we have a faint recollection of a recommendation made by one of the members of that august body, and that was "eat more fish." The cry was by no means clarion-like. Commissions have to sing very quietly in their advisory capacities owing to the fear which they seem to have of treading on the corns of some "interest." The meat interest probably had pianissimo effect upon the "eat fish" slogan.

The New York City Health Department recently issued a bulletin which could be well applied in Canada, and we print the statement herewith:

Fish.

"Haddock contains 13 per cent protein; sells for 7 cents a pound.

Herring contains 19 per cent protein; sells for 8 cents a pound.

Bluefish contains 19 per cent protein; sells for 10 cents a pound.

Codfish contains 18 per cent protein; sells for 12 cents a pound.

Eels contain 18 per cent protein; sell for 15 cents a pound.

Beef.

Chuck contains 19 per cent protein; sells for 24 cents a pound.

Rump contains 19 per cent protein; sells for 24 cents a pound.

Round contains 21 per cent protein; selsl for 20 cents a pound.

Sirloin steak contains 19 per cent protein; sells for 30 cents a pound.

Ribs contain 18 per cent protein; sell for 26 cents a pound.

Since you eat meat for the protein it contains, why not eat it in the form of fish, and save money?"

Fish of all kinds are easily procurable in Canada. Our waters, sea and lake, teem with edible fish of many varieties. Canadian fish, owing to the low temperature of the water in which they live, is unexcelled anywhere in the world, yet fish is regarded more in the

light of a compulsory Friday diet or a mere sideline than as a staple article of food in this country.

In addition to the fish enumerated above, we might mention halibut, which can be procured at 12 cents per pound; mackerel, 12 cents per pound; Canadian soles, 12 cents per pound; pollock, 8 cents per pound; sword fish, 12 to 15 cents per pound; whitefish, 9 to 15 cents per pound, and many other sea and fresh water varieties ranging from 10 to 15 cents per pound. Canadian salted, dried and smoked fish are equal to any of the imported brands, and for a delicious sea food it would be hard to beat finnan haddie—the best of which can be purchased from 10 to 15 cents per pound. Herrings, kippers, and ciscoes can be procured still cheaper.

Much of the palatability of fish depends on the house-wife. If she is a good cook, she can serve the sea food in a dozen tasty ways. If her culinary abilities are small, any standard cook book will give her a hundred recipes for preparing fish—and fish will stand a lot at the hands of an amateur chef without becoming absolutely distasteful. For those who would make a sincere effort to reduce living expenses, the Government has endeavored to assist by the publication of a handsomely gotten up cook book on "Fish and How to Cook It," and a copy can be procured from the Naval Service Department, Ottawa, on receipt of a post card.

Living expenses are high, and will remain so until the Canadian public will take the trouble to make use of the foods which our natural resources so bountifully offer. Apples are being appreciated more now than they ever were before, owing to the publicity given the fruit by the Department of Trade and Commerce. The person who insisted on grapefruit and oranges for a starter at the morning meal is now finding out that a baked apple is just as palatable, and a great deal cheaper. It is time now to make up to the fact that fish—Canadian fish—can take the place of a great deal of the expensive meats which form such a large part of our Canadian daily diet.

British Columbia Fisheries

In the report of the British Columbia fisheries for 1913 issued recently, it is interesting to note that the Province leads all Canada with a value of $14,445,480. Nova Scotia ranks second with Fisheries valued at $7,384,054—almost half the amount credited to the Pacific province.

Salmon constitutes the major part of the total—the 1913 salmon pack amounting to $9,540,368—slightly less than the previous year by $311,529. This deficit is accounted for by lower prices and a smaller demand for the cheaper varieties. Halibut and herring are responsible for the large increase. Halibut amounted to a value of $2,461,208—an increase of $606,073 over 1912, while herring, with a value of $1,017,417, shows an increase of $602,687 over the year previous.

The total fishery shows an increase of $778,363 over 1912, for which, the report states, the removal of the duty upon fresh fish entering the United States is largely responsible.

The War and the Fish Trade

There is no talk of hard times in the Canadian fish trade. Some concerns may feel the effects of the European struggle, but as a rule they are patriotic enough to remain optimistic and make the best of things. On the other hand, a number of the large producers in the fresh fish business supplying the inland markets are doing exceedingly well and looking forward to a good winter.

On interviewing several of the large dealers in Montreal, the writer heard no complaints of the war affecting trade—indeed, the only complaints made were about the unseasonably warm weather. All the concerns reported good orders and a steady demand for fish—in many cases an increasing demand.

There is no doubt about it, that fish is becoming more of a regular diet than formerly. People are beginning to eat more fish, and within the last month we have noticed a number of articles in newspapers scattered throughout the country advocating the use of fish in place of meat. Publicity is what the fish business needs to create a demand, and publicity of the right sort is not to be had without spending money. With the war causing people to cut down living expenses, the present is a good time to start advertising fish. It will pay in the long run.

Prince Rupert Fisheries

Prince Rupert, the Pacific Ocean terminus of the Grand Trunk Pacific Railway, is beginning to announce to the world that it is destined to be the largest fishing centre on the west coast. And the optimists who believe in the future of Prince Rupert are pretty well sure of their prophecy.

The Rupertonians in the fish business are certainly alive to the possibilities of their city as a a receiving and distributing centre for fish, and the various firms located there or in the vicinity are aggressive and out for business. This month several cars of Prince Rupert fresh halibut consigned to eastern dealers have arrived and the goods have been all that is claimed for them. Elsewhere in this issue we publish a photograph of a car of Prince Rupert halibut which arrived in Toronto recently.

The supply has been made possible by the completion of the Grand Trunk Pacific Railway. In special refrigerator cars the Canadian Express Company has during the last few days delivered 60,000 lbs. of

fresh halibut to Eastern dealers. This is the first regular fish shipment from Prince Rupert, but these will now be continued all the year round. Each car carried 100 boxes, each box containing 200 lbs. of halibut. On the sides of the cars were large painted signs telling the story of Prince Rupert's wonderful fishing industry.

The waters in the vicinity of the Western terminal of the Grand Trunk Pacific Railway have been declared by experts to be rich beyond any others in the world, in their wealth of fine fish. Millions of pounds of halibut, cod and other staples have been taken there for some years past. Most of this has been smoked and dried. With rapid railway communication now at hand, however, local consumers will be able to obtain halibut in its fresh state, for the halibut is being delivered in Montreal, Boston, New York and other points in five days.

The Fish and Fish Foods we Import from Abroad

The following table compiled by the Canadian Manufacturers' Association shows how much fish and fish foods we imported into Canada from other countries:

	Quantity.	Values.
Fish:—		
Anchovies and sardines, packed in oil or otherwise, in tin boxes weighing over 20 ozs. and not over 36 ozs. .. ..Boxes	12,053	962
Anchovies and sardines packed in oil or otherwise, in tin boxes weighing 8 ozs. or less	7,070,175	391,740
Cod, haddock, ling and pollock, dry salted or smoked	394,524	$21,870
Fish, prepared or preserved, N.O.P.. Lbs.	1,723,408	175,033
Lobster, canner, N.O.P. ....Lbs.	1,878	442
Mackerel, pickled .. ..Lbs.	23,971	1,466
Oysters, canned, in cans not over one pint ....Cans	550,514	50,807
Oysters, canned, in cans over one pint and not over one quart .....Cans	9,844	4,902
Oysters, canned, in cans exceeding one quart ....Qts.	2,268	1,202
Oysters, prepared or preserved, N.O.P. ....Lbs.	51,987	4,919

The value of these imports amounts to $653,343—a sum of money which could easily be kept in the country. Anchovies cannot be procured in Canada, but Canadian Sardines, if properly prepared and packed, could easily take their place, and that of the sardines we have been importing. Cod, haddock, ling, pollock, dry salted and smoked; lobsters, mackerel and oysters are all Canadian sea products readily obtainable. In certain prepared and preserved fish we have no lines which can compare with Continental goods, but we have many others which could take their places. Just to mention a few, we might point out what we have in smoked salmon and halibut fletches, canned finnan haddie, herrings in tomato sauce, canned halibut and cod, bloaters, smokies, boneless smoked herring, fillets of smoked haddock, in addition to many other special fish foods prepared by Canadian firms.

In fish oils we import over 33,000 gallons valued at $13,750. Is this really necessary? With all this business offering it seems to us that Canadian fish dealers, canners and packers have some great opportunities. The consumers of the country are being urged to buy nothing but Canadian products and the present time offers rare chances to capture this import trade and keep it within our own borders.

Piscatorial Paragraphs

There is no evidence of "blue ruin" with the fresh fishermen on the Atlantic coast. Two years ago, Digby, N.S., had but four vessels engaged offshore fishing out of the port. To-day, there are ten schooners running their trips into Digby. Yarmouth, N.S. is fast regaining some of its former glory as a fishing centre. One of the fish firms there had to construct a bunk house for boat fishermen which they induced to come from other ports in order to supply the market.

* * *

It has been reported that a clause has been discovered in one of the existing treaties between Canada and the United States which stipulates that when the United States removes the duty on fish the Modus Vivendi licenses issued to U.S. fishing vessels shall be granted without charge. There is a strong movement on foot to dispense with the license and allow American fishermen to fit out and fish from Canadian ports. It would certainly bring benefits to a number of the Nova Scotian ports handy to the fishing grounds.

* * *

A steamer arrived in New York recently with a cargo of 3,400 barrels of Iceland herring consigned to Chicago. This looks as if there were opportunities for our own herring provided they are cured and packed properly. The new Fish Inspection Act goes into force on May 1st, 1915, and with a view to educating fishermen and packers in the art of curing and packing fish, officials of the Fisheries Department are arranging a series of demonstrative lectures in various fishing centres. If by this means we can bring Canadian cured fish to a higher grade, we should stand a fair chance in competition with the goods imported from Europe in both our own and other markets.

* * *

In Great Britain at the present time they are advocating fish as a war time food. It is an appeal to the patriotism of the people. By eating more fish the fishermen will be kept fully employed and the heavy stocks on hand, usually exported to Germany and other European countries now engaged in changing

the map, will be consumed. "Keep the fishing going!" is the cry in England, and it may well apply here in Canada. If our people would live off what we produce ourselves instead of neglecting what we have in favor of imported stuff, our natural resources would flourish amazingly, and the money be kept in the country.

* * *

The Canadian fishermen on both coasts are pursuing their business without interruption. Our vessels are free to dip trawl, hand-line and seine and reap the harvest of the sea with no fear of capture or attack from an enemy, and the market holds as good, if not better, than it ever was. Yet in our prosperity and uninterrupted business it would be well to give a thought to the men and the means which makes these conditions possible. Remember the British Navy! And when an appeal comes to assist the families of those who are guarding our interests on the seas, give liberally and remember when you contribute that if it were not for the fleet and the gallant fellows who man it, there would not be a single Canadian fishing vessel outside of the three mile limit. Fishermen! Assist those who are doing their duty for the Empire.

* * *

The U.S. Bureau of Fisheries is urging the Maine canners to get after the sardine trade. Maine already supplies $2,000,000 of canned sardines for home consumption, and about the same amount is imported from France, Norway, Sweden, England, Spain and Portugal. The sardine export from the latter countries have practically stopped and the sardine packers of Maine are being advised to improve their methods of catching and canning so as to adequately fill the place of the imported goods. Perhaps Canadian canners on the New Brunswick and Bay of Fundy shore could make a note of this and get in on any business that offers.

* * *

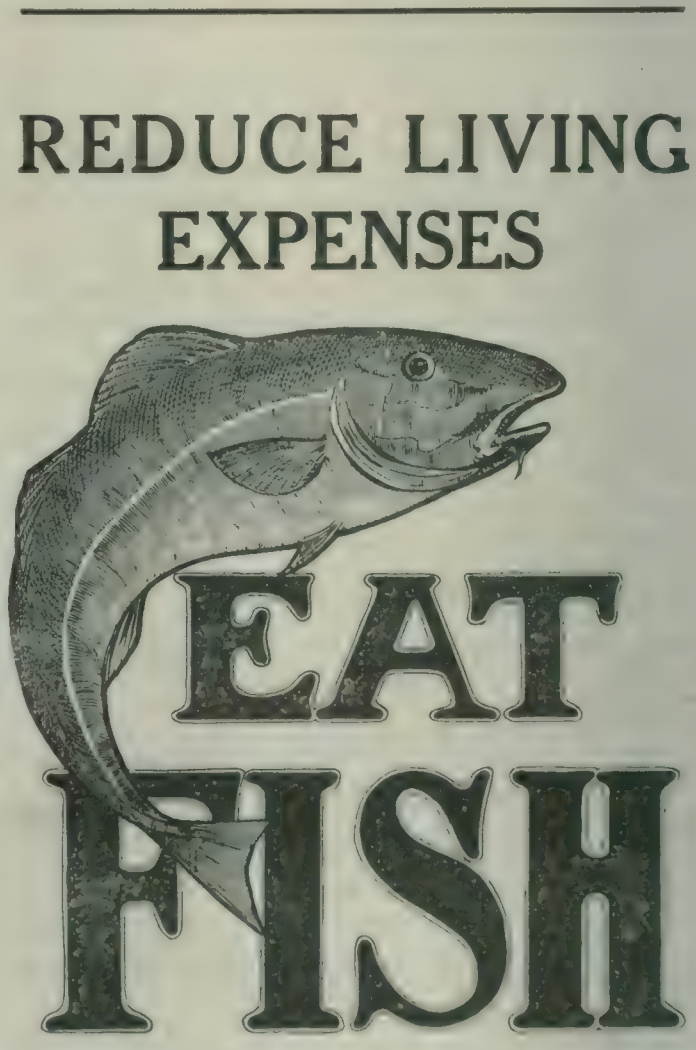
While on a lighthouse erecting trip to Hudson's Bay the Canadian Government ice-breaker "Minto" was in Port Burwell, Davis Straits, at the end of August. The crew caught enough fish at this place to last them six months, and all were unanimous in stating that there were no better fishing grounds anywhere. The possibilities of Davis Straits and the Bay as future fishing grounds are well worth looking into.

* * *

The Lunenburg salt fish catch is away off this season. Many of the fleet have scarce made enough to pay for outfits and store bills and the average fare runs to about 750 to 770 quintals. The fishermen are holding out for a price over $7, but the state of the European markets and the large Newfoundland stock which will be on hand do not promise much. Compared with last year there is very little hake in this season's catch.

* * *

Apropos of the shipments of Prince Rupert halibut to eastern markets, the Halifax Herald wonders, 'Why does not Nova Scotia fish find a place on Montreal tables, 3,000 miles nearer?" If the Herald refers to Atlantic halibut, a prominent fish dealer writes, the answer is simple enough. Atlantic halibut runs to too large a size for the requirements of the Canadian market and the retailers will not buy large fish when they can procure mediums and chickens such as come from the Pacific. The Atlantic halibut is in no way inferior to the Pacific article, but size is against it. Until we can train this flatfish to refrain from growing after it has reached a hundred pounds there will be no ousting of Atlantic halibut from Eastern markets by the Pacific fish.



Design for an "Eat Fish" poster, which could be distributed throughout the country to good effect.

THE PELAGIC SEAL INDUSTRY

By L. H. MARTELL, M.A., B.C.L., Barrister-at-Law.

Among the many profitable callings that were engaged in by those that go down to the sea in ships pelagic seal hunting and catching on certain parts of the Pacific Ocean once occupied a most important place. The value of the fur of the pelagic seal is great, and as a consequence many were the people that engaged in the business of taking the fur seal.

History of the Beginning of Pelagic Sealing.

Care should be taken not to confuse pelagic sealing with the raiding of rookeries in early years by vessels from Russia and the United States of America, and probably from other countries. Such a method of spoilation of the rookeries was carried on, it is said, as early as 1772. Efforts have been made to confound legitimate pelagic sealing with these early piratical ventures.

What may be termed Pelagic sealing proper, carried on in the open ocean in extra-territorial waters is of comparatively recent development. It is said to have begun in the early seventies by vessels from the United States. Canada entered the field in the early eighties, as the first seizure of Canadian vessels was made in 1886, and some of the vessels seized had been in the business for a number of years.

Rookeries.

The main rookeries for the North Pacific fur-seals are on the Pribyloff Islands on the American side and on the Commander and Kurile Islands on the Asiatic side. As the Pribyloff Islands form part of Alaska all these islands at one time belonged to Russia.

The seals resort to these islands in May and June for breeding purposes. They remain there until the weather begins to get cold in the fall of the year, when they take to the water and remain there steadily until the following summer. They journey South in a scattered manner as far as about the 30th parallel of North latitude. On their return the pelagic sealers got in their work. Taking seals before the Paris Award Regulations was carried on in Behring Sea in the vicinity of the islands, as the bachelor seals, as well as the mothers after pupping and being allowed to go from the harems by the bulls, made journeys of many miles from the islands seeking food.

The seal islands in Behring Sea were discovered by Vitus Bering about 1741. From that time onward the seal industry was prosecuted no doubt mainly by raids on the rookeries and not by the method known as pelagic sealing with which former method the latter has been frequently confounded.

The Sealing Fleet in Victoria, B. C., when Sealing was at its height

Pages of interesting matter could be written about the early adventurous voyages.

After a desultory exploration of the seal rookeries for many years in 1779, the Russian Emperor granted a lease of the sealing privileges to a company composed of Russians and Americans, known as the Russian American Company. This lease conveyed the exclusive right of taking and trading in all kinds fo furs, and covered with Aleutian and Kurile Islands and also those in the Behring Sea. The lease was renewed with some variations and modifications on two occasions after its termination from year to year until the Treaty of Cession in 1867.

Four years after the transfer of the Pribyloff Islands to the United States a lease for the term or period of twenty years of the sealing privileges on the Pribyloff Islands was granted to a company formed in San Francisco, known as the "Alaska Commercial Company." The said Company was allowed 100,000 seals per year. Shortly after this some United States vessels began to return from Northern voyages with seal skins on board. To this the lessees objected. The United States Government, as it was getting a revenue of so much per skin on every skin taken by the lessees, was losing such revenue by any other sealing operations, and the said government decided in the early eighties to try and stop such vessels sealing. However, in the meantime, some Canadian vessels had entered the field and so to stop the practice was not an easy matter.

Though the United States for some years endeavored to hold the exclusive privilege for its lessees it was not until 1886 that by any positive over tact it sought to exercise jurisdiction over Behring Sea outside of territorial waters. In that year three British vessels were seized—the "Carolina," "Onward" and "Thornton" on the charge of being found engaged in killing fur-seals within the limits of Alaska territory and in the waters of said territory in violation of section 1956 of the Revised Statutes of the United States. (This section prohibited without proper authority the killing, among other animals, of fur-seals within the limits of Alaska terirtory or in the waters thereof.) The vessels were condemned and their masters and mates fined. As these vessels were, when seized, more than three miles from land, the United States set up the contention that the Behring Sea was Mare Clausum.

(Mare Clausum—A sea which all nations have not an equal right to use. The celebrated work entitled "Mare Clausum" was written by Selden in answer to a treatise by Grotius entitled "Mare Liberum" in which he claimed that all nations have an equal right to use the sea.)

The Modus Vivendi.

The disputes in connection with the Behring Sea question were the subject of very lengthy negotiations and a great deal of diplomatic correspondence between Great Britain and the United States. While correspondence was taking place looking towards an agreement for the reference of the disputes to arbitration, propositions were submitted by the United States to Her Majesty's Government for the putting into effect of a Modus Vivendi in the American portion of Behring Sea, by which the vessels of both nations would be excluded therefrom during the pendency of the arbitration. The negotiations resulted in such an agreement and in 1891 British sealers were prohibited from entering these waters—that is the eastern half of Behring Sea—for the purpose of plying their calling. The Modus Vivendi was continued during the season of 1892.

The British sealers forced out of their usual hunting grounds by the Modus Vivendi, and having that year reached the Aleutian Island Passes to the prohibited waters of Behring Sea, through which the seal herd which they had followed up the coast, had just entered, found themselves many hundred miles from home with the alternative of returning to Victoria, thus giving up their sealing voyage, or seeking other places where they might carry on their operations to the Russian side. These operations met with a disastrous rebuff from the Russian authorities, for in 1892 following the example of the United States before referred to, the Russians seized the following vessels: "Willie McGowan," "Ariel," "Rosie Olsen," "Carmolite," "Marie" and "Vancouver Belle" and ordered the "C. H. Tupper" and the "W. P. Hall" out of their waters.

Diplomatic correspondence at once took place, and claims were submitted on behalf of the owners of the aforesaid vessels. Russia appointed a commission of its own to consider the legality of the seizures and that commission found that with the exception of the "Willie McGowan" and the "Ariel" the seizures were bona fide and good at law. Liability being admitted by Russia in the case of these two vessels she paid compensation in the premises, which was received by Canada and paid over to the claimants. Great Britain was not satisfied with Russia's ex parte findings and still strenuously upheld the justification of the other vessels, with the result that Russia agreed to submit the remaining claims to arbitration. The negotiations concerning the terms of the reference to arbitration continued for about three years without any result, this being caused by the Russian negotiators seeking to impose the introduction of extraneous agreemnts and irrelevant evidence, which if admitted would be fatal to Great Britain's contentions. Thus the negotiations for arbitration fell through.

The matter was again taken up diplomatically, and it was eventually agreed to submit the disputes to a conference composed of Russian and Canadian delegates.

This conference met in London in the month of March 1904, and after a full discussion of each vessel's claims, all were dropped save that of the "Vancouver Belle" and the "Carmolite," Russia agreeing to admit liability in the case of these two on condition that the other claims were not pressed, and to this the Canadian delegates agreed. Compensation was subsequently paid by Russia through His Majesty's Government and eventually was paid over to the claimants entitled.

The Paris Award.

The arbitration between Great Britain and the United States was held at Paris in 1894 and resulted in a complete vindication of Great Britain's contentions. The arbitrators decided in substance (inter alia) that (a) Behring Sea is not a Mare Clausum; (b) That there is no exclusive jurisdiction as to sealfisheries in Behring Sea outside of ordinary territorial waters, and (c) that the United States has no right of protection or property in the fur-seals frequenting the islands of the United States, when such seals are found outside the ordinary three-mile limit.

Paris Award Regulations.

In addition to making certain findings of fact in the matter of the disputes between Great Britain and the United States, the arbitrators at Paris, with a

view to affording the seals reasonable protection, recommended for promulgation by the parties certain regulations which are known as the "Paris Award Regulations." Though it was thought those restrictions would prove the undoing of pelagic sealing, the first year after their operation the biggest catch ever made was effected. From that time on the United States Government tried to procure greater restrictions, while the pelagic sealers took the opposite ground. The Kurile Islands were given to Japan in 1875, and as a consequence of this the position became more embarrassed about 1900 by a number of Japanese vessels getting into the field. As Japan was not a party to the Paris Award, her vessels were not subject to any restrictions outside territorial waters, and the industry on land and sea rapidly declined.

Some famous sealing schooners. From left to right: Schooners "Carlotta G. Cox," "Casco," "Vera," "Oscar and Hattie" and "Dora Siewerd." .The "Casco" was R. L. Stevenson's famous Pacific cruiser.

Owing to the polygamous nature of seals, a large percentage of males may be taken each year without disadvantage to the herds. On land the seals can be driven a considerable distance, and thus selection can be made, so that the males can be separated from the females. This is not possible at sea, so that as a matter of fact the greater number of seals taken by pelagic sealers were females. Therefore, pelagic sealing, though a legitimate industry, is not an economical method of carrying on the business of securing fur-seals.

Recognizing the foregoing and realizing that something must be done to save extermination of the Pelagic seal, Great Britain, Japan, the United States and Russia at Washington on July 7th, 1911, agreed to what is now known as the "Pelagic Sealing Treaty."

The Pelagic Sealing Treaty.—Signed at Washington, July 7th, 1911.

Great Britain, Japan, Russia and the United States of America are the parties to this convention for the adoption of means looking to the preservation and protection of the fur-seal signed at Washington on July 7th, 1911.

Legislation was subsequently enacted by the proper law-making bodies of the countries concerned adopting the convention and providing ways and means of enforcing it.

The Convention provides (inter alia), (a) That the citizens and subjects of the signatory powers and all persons subject to their laws and treaties, and their vessels, shall be prohibited during the pendency of the Convention from engaging in pelagic sealing in the waters of the North Pacific Ocean, north of the thirtieth parallel of north latitude and including the seas of Behring, Kamchatka, Okhotsk and Japan(and that every such person and vessel offending against such prohibition may be seized, except within the territorial jurisdiction of one of the other Powers, and detained by the naval or other duly commissioned officers of any of the parties to the Convention, to be delivered as soon as practicable to any authorized official of their own nation at the nearest point to the place of seizure, or elsewhere as may be mutually agreed upon; and that the authorities of the nation to which such person or vessel belongs alone shall have the jurisdiction to try the offence and imporse the penalties for the same; and that the witnesses and proofs necessary to establish the offence, so far as they are under the control of any of the Parties to the Convention, shall also be furnished with all reasonable promptitude, to the proper authorities having jurisdiction to try the offence;

(b) That no port of the High Contracting Parties shall be used by any person, or vessel for any purpose whatsoever connected with the operations of pelagic sealing in the waters within the protected area before mentioned.

(c) That Japan, Russia and the United States of America shall maintain a guard or patrol in the waters frequented by the seal herd in the protection of which each is especially interested, and that all the High Contracting Parties must co-operate with each other for the purpose of preventing pelagic sealing in the prohibited area hereinbefore set out.

Disposition of Seals Taken by Land Killing.

The Convention provides for the disposition of the seals taken at the rookeries by the nations owning the islands on which the rookeries are situated. In so far as Canada is concerned the United States, of the total number of seal skins taken annually under the authority of the United States upon the Pribyloff Islands or any other islands or shores of the waters embraced in the prohibited area for pelagic sealing, subject to the jurisdiction of the United States, to which any seal herd resorts, is to deliver to Canada at the end of each season fifteen per cent gross in number and value thereof. The United States also paid to Canada the sum of two hundred thousand dollars $200,000) as an advance payment in lieu of such number of fur-seal skins as Canada would be entitled to under the Convention, the United States to retain skins to that amount or value in satisfaction of this payment. It is provided that Canada's share of the seal-skins taken from the American herd under the terms of the Convention shall not be less than one thousand ($1,000) in any year, even if such number

is more than fifteen per cent (15 per cent) of the number to which the authorized killing is restricted in such year, and where no killing is permitted by the United States in any year the United States is to pay Canada ten thousand dollars ($10,000) annually in lieu of any share of skins during the years when no killing is allowed. The United States is to retain Canada's share to reimburse itself for the advance payment aforementioned, and the United States is also entitled to reimburse itself for any annual payments made to Canada as hereinbefore mentioned by retaining an additional number of seal skins from Canada's share over and above the minimum allowance of one thousand skins in any subsequent year or years when kill is resumed, until the whole number of skins retained shall equal, reckoned at their market value, the entire amount so paid, with interest at the rate of four per cent per annum. If the total number of seals frequenting the United States islands in any year falls below one hundred thousand, then all killing, save the inconsiderable supply necessary for the support of the natives, may be suspended without allowance of skins or payment of money equivalent untill the number of such seals again exceeds one hundred thousand.

From the foregoing it will be gathered that the United States has the right to regulate or to prevent killing at the seal rookeries situated on territory under her jurisdiction.

The Russian Rookeries.

Of the number of seals taken by Russia from her seal rookeries within the prohibited area she is to deliver to Canada fifteen per cent gross in number and value at the end of each season. However, Russia has the right during the first five years of the Convention to suspend altogether the taking of sealskins on the islands and shores subject to her jurisdiction, but during the last ten years of the term of the Convention not less than five per cent of the total number of seals on her rookeries and hauling grounds shall be killed annually, provided that said five per cent does not exceed eighty-five per cent of the three-year-old male seals hauling in such year. If the total number of seals frequenting the Russian rookeries in any year falls below eighteen thousand then the allowance of skins aforementioned and all killing except such as may be necessary for the support of the natives on the islands where the rookeries are, may be suspended until the seals again exceed eighteen thousand.

Japan.

Japan is to deliver to Canada ten per cent of the seals taken on her rookeries situated within the prohibited belt. During the first five years of the Convention, Japan may suspend altogether the taking of sealskins and impose whatever regulations and restrictions she desires as to the total number of sealskins that may be taken in any season, but during the last ten years of the term of this Convention not less than five per cent of the total number of seals on the Japanese rookeries and hauling grounds are to be killed annually, provided that said five per cent does not exceed eighty-five per cent of the three-year-old male seals hauling in any such year. If the number of seals frequently the rookeries under Japanese jurisdiction falls below six thousand five hundred then the allowance of skins mentioned above and all killing except such as may be necessary for the support of the natives may be suspended until the number of such seals again exceeds six thousand five hundred.

The Convention also sets out the duties and obligations in the premises of Japan, Russia and the United States, each towards the other.

The Effect of the Various Arbitrations and Conventions.

The effect of the Arbitrations and Conventions considered, has been to do away with pelagic sealing in the North Pacific Ocean. The Convention became effective on the fifteenth day of December, 1911, and it is to continue for the term or period of fifteen years from that date, and thereafter until terminated by twelve months' written notice given by one or more of the parties to all of the others, which notice may be given at the expiration of fourteen years or at any time afterwards.

Canada had no pelagic seal rookeries under her jurisdiction, and the only way in which her people could secure the pelagic seal in the North Pacific Ocean was by fitting out vessels to engage in their hunting on that ocean beyond territorial limits. For many years it was a profitable business, and many were the vessels that were fitted out and manned by men from all parts of the Dominion to engage in the hunting and taking of the fur-seal. Each vessel was well supplied with boats, which carried men to steer and row, in addition to the hunter who shot the seal as it appeared above the surface of the water.

The Pelagic sealing industry was a great source of income to many people beside the crews of the various vessels, for such as shipwrights, sailmakers, riggers, boat builders and the like found regular and profitable employment as a consequence of it.

The vessels usually made Victoria, British Columbia, their place of fitting out and departure, and one of the boasts of that port was its fine fleet of pelagic sealing vessels. But pelagic sealing is no more, and all that now remains to harbor of Victoria to remind one of the great days of pelagic sealing are some of the old hulks of what was once her proud fleet of pelagic sealing vessels.

Compensation.

Arrangements are being made by the Canadian Government to pay compensation to those who have been directly damnified by the prohibition of pelagic sealing. Hon. Mr. Justice Audette, Assistant Judge of the Exchequer Court, has been appointed a Commissioner to enquire into and report on the bona fides and strength of the various claims presented. One of the chief claimants is the Victoria Sealing Company, and I would not be surprised to see that Company awarded the lion's share of the sum from which compensation is to be paid. The matter of who is entitled to compensation is now as I have already said, under consideration by a Canadian judge. It is subjudice so to speak, and therefore one should not comment upon the matter. However, let me say that from observations I have made I do not believe that the company mentioned has any great claim for consideration. Compensation as a matter of right only belongs to those who were actively engaged in pelagic sealing at the time the Pelagic Sealing Treaty of 1911 became effective, and to the sailors and hunters who had spent most of their days in the business of pelagic sealing and who as a result of the Treaty of 1911 are no longer permitted to ply their callings. In short, as regards the matter of compensation, the question is, who will come out on top, the corporation or the common sailor. Let those of us who love the common people watch for the answer!

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company.)

In spite of depression in the trade in general, fish business is keeping up remarkable well. No doubt, that the community at large has realized that fish food is economical, healthy and satisfactory.

The prospective of high priced meats due to export to Warfaring Countries is also a stimulus towards making fish diet more popular.

With a little more knowledge of the way how to prepare for the table the excellent varieties of fish produced by our oceans, lake and rivers, no doubt, the fish business would increase materially and produce wealth and contentment in the country at large.

Quotations are as follows:

Fresh Fish.

Mackerel	per lb.	.10
Gaspe Salmon	per lb.	.16
Halibut	per lb.	.13
Haddock	per lb.	.05
Steak codfish	per lb.	.07
Market codfish	per lb.	.05
Flounders	per lb.	.06
Blue fish	per lb.	.12
Live Lobsters	per lb.	.30
Whitefish	per lb.	.11
Pike	per lb.	.07
Perch	per lb.	.05
Bull heads	per lb.	.10

Canned Salmon

Red Sockeye Salmon, 4 doz. case	10.00
Red Cohoes Salmon, per cs. 4 doz.	7.00
Pink Salmon, per cs. 4 doz.	5.00
Pale Salmon, per cs. 4 doz.	4.25

Smoked Fish.

Haddies, per lb.	.07
Fillets	.11
Fillets	.12
Kippers, per box	1.20
Bloaters, per box	1.20
Smoked Herrings, box	.16
Boneless Smoked Herrings, box	1.10
Smoked Eels, per lb.	.12

Frozen Fish—Sea Fish.

	Prices.	
Salmon—Gaspe, large, per lb.	.14	.15
Salmon, Red—Steel heads, per lb.	.13	.14
Salmon, Red—Sockeyes, per lb.	.10	.11
Salmon, Red—Cohoes or Silvers, lb.	.09	.10
Salmon, Pale Qualla, dressed per lb.	.07½	.08
Halibut, white western, large and medium, per lb.	.09	.10
ackerel, Bloater, per lb.	.07	.08

Frozen Fish—Lake and River.

White fish, large per lb.	.10	.11
White fish, small Tulibees per lb.	.06½	.07
Dore, dressed or round per lb.	.08½	.09
Pike, dressed and headless per lb.	.06½	.07
Pike, round per lb.	.06	.06½

Pickled Fish.

Salmon, Labrador, Tierces, 300 lbs.	19.00
Salmon, Labrador, Brls. 200 lbs.	14.00
Salmon, Labrador, Half Brls., 100 lb.	7.50
Salmon, B.C., Brls.	13.00
Sea Trout, Baffin's Bay, Brls., 200 lbs.	12.00
Sea Trout, Labrador, Brls., 200 lb.	11.50
Sea Trout, Labrador, Half Brls., 200 lbs.	6.75
Mackerel, N.S., Brls. 200 lbs.	12.00
Mackerel, N.S., Brls. Half., 100 lb.	6.25
Mackerel, N.S., Pails, 20 lbs.	1.50
Herrings, Labrador, Brls.	5.50
Herrings, Labrador, Halfs Brls.	3.00
Herrings, Nova Scotia, Half Brls.	2.90
Herrings, Nova Scotia, Brls.	5.40
Quebec Sardines, Brls.	6.00
Quebec Sardines, Half Brls.	3.50
Scotch Herrings, imported, half brls.	8.00
Scotch Herrings, imported, kegs.	1.25
Holland Herrings, imported milkers, half brls.	7.00
Holland Herrings, imported milkers, kegs.	1.00
Holland Herrings, mixed, kegs	.90
Holland Herrings, mixed, kegs	.75

Salt Fish.

No. 1 Green Cod, large Brl.	8.50
No. 1 Green Cod, medium, brls.	7.50
No. 1 Green Cod, small, brl.	6.50
No. 1 Green Cod, Haddock, medium, brl.	7.00
No. 1 Green Cod, Haddock, small, brl.	5.95
No. 1 Green Cod, Pollock, medium, brl.	6.00
No. 1 Green Cod, Hake, medium, brl.	5.00
No. 1 Quebec Eels, large, per lb.	.06½

Dried and Prepared Fish.

Dried Hake, medium and large, 100 lb. bund's	6.00
Dried Pollock, medium and large, 100 lb. bund.	5.50
Dressed or skinless Codfish, 100 lb. cases	7.50
Boneless Codfish, 2lb. blocks, 20 lb. boxes, per lb. .07	.08
Boneless Codfish, strips 30 lb. boxes	.11
Shredded Codfish, 12 lb. boxes, 2 cartons, ½ lb. each, per box	1.75
Boneless Codfish, in 2 lb. and 3 lb. boxes	.13

Oysters, Clams, Mussels and Shell Fish.

Cape Cod shell oysters, per barrel.	8.25
Malpeque shell oysters, selected, C.C.I., per barrel	10.00
Malpeque shell oysters, selected J.A.P., per barrel	8.50
Malpeque shell oysters, selected XXX, per barrel	8.00
Malpeque shell oysters, ordinary, per barrel	7.00
Malpeque shell oysters, caraquets, per barrel	5.00
Clams, per barrel	5.00
Mussels, per barrel	4.00
Live Lobsters, medium and large, per lb.	.30
Boiled Lobsters, medium and large, per lb.	.32
Lobsters—New Crop—1 lb. flat tins, per case	23.00
Lobsters—New Crop—½lb. flat tins, per case	23.50

BUSINESS AS USUAL

TWO GASPE FISHING PORTS

Paspebiac Bar and Stores of Robin, Whitman and Company.

The Port of Perce

THE FISHERIES OF GASPESIA

By ALFRED PELLAND

On his return from a journey to Gaspesia in 1836, Abbe Ferland wrote:—"It is the home of the cod. Your eyes, nostrils, tongue and throat, even your ears will soon convince you that in the Gaspesian peninsula this fish is the staple of food, amusements, business, conversations, regrets, hopes, fortune and life; I would even venture to say the basis of society, itself."

Thus there is no great risk in asserting that such country seems to have been known to the men from the North, from Greenland or Iceland as far back as the tenth and eleventh centuries. This assertion of many early historians is further confirmed by Father Christian Leclerc, a Recollet missionary, who found that the natives of Gaspesia had very accurate ideas of navigation.

Mr. Benjamin Sulte says that even before Jacques Cartier's first voyage, fishing and the fur trade were carried on from the Gulf of St. Lawrence to Lake St. Peter. They who engaged in this were probably Basques. In various parts of the narration of his travels, Champlain also mentions their presence.

The stories of Cartier's voyages attracted the attention of the Breton and Norman fishermen to the fisheries of the Gulf of St. Lawrence, and those adventurous mariners soon took advantage of them.

Afterwards Champlain, Sagurd and the first relations of the Jesuit missionaries, spoke highly of the ichthyological wealth of Gaspesia. But Denys in his "Description Geographique et Historique des Corte's de l'Amerique Septentrionale" (Geographical and Historical Description of the coast of North America), was the first to write fully and authoritatively on the fisheries of that region. Being himself the grantee of the whole south shore of the Gulf of St. Lawrence from Canteau to Cap Rosier, he was the first to establish fixed fishing stations there, which he operated with varying fortune from 1623 to 1688. His first fishery was at Petite Riviere (now Barachois) and his fishing stations, which were destroyed by Phipps' fleet, were restored by other members of his family.

While Denys was operating the fisheries on the Baie des Chaleurs, one Riverain, installed himself at Matane and Cap Chat.

Denys and Riverain were the two principal persons who carried on the exploitation of the Gaspesian fisheries, but they were not very fortunate, notwithstanding the abundance of fish. Cod, mackerel, seal, the beluga or white, and the common whales, were then caught on the very shores of Gaspesia, and their products may be said to have supplied the European markets.

Fishermen of Gaspe

* * *

During the wars which preceded the cession of Canada to England, the Gaspesian fishing stations were destroyed. Wolfe himself was engaged in carrying out this sorry work, but he did so with great reluctance.

Then the fishermen from the Norman Islands in the English Channel came over to take advantage of those fisheries. The most celebrated of them was Charles Robin, who founded at Paspebiac an establishment des-

tined, in the future, to embrace the whole peninsula. For many years he held sway over fish and fishermen. His was a monopoly without example in the history of Canadian industry with the exception of that of the Hudson's Bay Company.

Dory Fishing on Miscou Bank

About the middle of last century, the Robin house still shipped 40,000 quintals of cod per annum and twenty ships were employed in conveying the same to Europe, the West Indies and South America.

Some fifty years after the establishment of the Robin house at Paspebiac, one of its former clerks, David Le Bouthilier, founded a rival concern, which was also destined to do business on an extensive scale since it shipped as much as from 25,000 to 30,000 quitails of cod yearly.

In his interesting "Sketches of Gaspe," Dr. J. M. Clarke gives an excellent monograph of the Robin house and its beginnings, from which the following is taken:

"It was not until after the fall of Quebec that capitalists from the Channel Islands became interested in the Gaspe fishing, and among the first of these were the members of the Robin family of Jersey. The Robins were established on the Baie des Chaleurs in 1764 and probably on Cape Breton as early, doing business in the latter place under the firm name of Philip Robin and Co., Philip and Charles being brothers, and in the former at Paspebiac as Charles Robin and Co.

"When Charles Robin came to Gaspe, the fishing was scattered in small establishments, and without organization. Though his purpose was to seek locations for new establishments on the capital he represented, yet the outcome was the development of a concern with interests so wide upon the coast and influences so commanding upon the greater part of the fishing industry as to practically consolidate and control the entire business without serious competition for nearly a century and to the pace for all future undertakings along this line. The firm name has changed with the times, but till 1886 it was Charles Robin and Co., it then took the form of C. Robin and Co., Ltd. A few years later Collas and Co. amalgamated with the old firm, and the title became The Charles Robin-Collas Co., Ltd. Up to this time the capital of the busines was all in Jersey, and the entire transaction of the fishing was carried out in accordance with orders from acros sthe sea. In 1904, Collas and Whitman of Halifax, entered the company, and the business is now the C. Robin Collas Co., Ltd., with headquarters at Halifax. To-day, with the main establishment at the historic location, Paspebiac, the company controls twenty-eight fishing stations all along the shores of Gaspe from Baie des Chaleurs to well up the mouth of the St. Lawrence and on the north shore of the river and the Labrador."

Abbe Farland[1] gives interesting details regarding the fisheries of the Baie des Chaleurs, of which the following is a brief summary:

"From sunrise to sunset the fisherman is continuously occupied in setting and taking up his lines and in removing his hooks from the gluttonous cod. When he returns to the harbor, the work of the land people begins. Men, woment and children work at splitting, dressing and salting the cod; in the following week they spread out, folded, and handle it in various ways before it can be classed as dry cod.

"The better kind of dry cod is called 'merchantable' and is clasesd as such when it shows no specks, cuts or bruises, it sells at a higher price than the other, and is destined for the Brazilian, Spanish and Italian markets. The second class is kept for Canada and the West Indies; it is the staple food of the

Dressing Codfish at Perce

Gaspe fisherman, who will turn aside from the merchantable cod as tasteless and select for his dinner one

[1] "La Gaspesie," Quebec, 1877.

that is fly-blown. The foreign matter causes fermentation, and gives a more piquant taste.

"Green cod is prepared only in the autumn, when rain falls too frequently to permit of drying; then the fish is merely split, cleaned and salted and is ready for packing.

"All who have studied it closely, the methods of the Gaspesian fishermen, agree in stating that it has never varied and that, after 250 years, the Basque and Breton fishermen would still recognize the beaches of the Baie des Chaleurs with their long lines of flakes. The only difference lies in the packing. Formerly the fish was shipped in packages,, but now it is carefully packed in barrels."

In connection with the abundance of cod, Mr. Clarke says:[2]—

"It is common conviction on the coast often expressed that the fishing is not as good as it was in bygone years; that the cod are fewer and the bait scarcer, but in old Denys' story of the fishing during the half century ending with 1672, there are occasional growls about the scarcity of bait, and if one considers how the fishing statistics have multiplied on the coast and how many more men are employed in the business than ever before, then it is but natural that the share falling to each man is palpably slender by comparison. Mr. Dolbel of the Fruing Co., has estimated for me that the number of fish taken at his stations amount to an average catch of three to four millions and, if this is a fair figure, certainly the entire Gaspe coast must afford from twenty to thirty millions of cod every year. The wonder is that after these nearly three hundred years of fishing, there is a cod left in all the Gulf. Perhaps no one could find a more effective illustration of the profluence of that 'alma mater' of all life—the sea."

Hauling Trawls in the Dory

* * *

A short description will now be given of the various kinds of fishing which may be carried on in Gaspesia, with some information regarding those engaged in it.

Cod fishing is carried on near the shore, in the coves and bays; this is called "shore fishing"; it is also done on the banks twenty-five to thirty miles from the coast. Fishermen with sufficient means, build their own boats, provide themselves with all necessary gear, fish on their own account, and sell their fresh fish to the merchants, or else they cure it and wait for the fall to sell it to speculators, who frequent the coast to buy all the fish they can get. They who are unable to provide their own boats and gear, rent them from the large canneries engaged in the fishing trade. The rent of a boat with all the gear varies between $25.00 to $35.00 per season, and the lease invariably stipulates that all the fish caught by the boat so leased shall be sold exclusively to the merchant furnishing it. These boats are about thirty feet long and from six to ten feet beam, are built of cedar, pointed at both ends like whale-boats, have two sails and are admirable sea-boats.

Hauling Herring Nets

For shore fishing, the men start very early in the morning, about two or three o'clock, and come back in the afternoon to have time to dress their fish before dark. Each boat is manned by two men, each of whom has two lines when they fish in from thirty to forty fathoms of water, and as many as four lines when they fish in ten fathoms. When the fish strike, the men have not a moment's rest; while taking a fish from the hooks on one line those on the other will be bitten at by other fish and be ready to be hauled up. Each line has two hooks, and when the fish bite well, two are brought up every time. Under such circumstances, a boat comes back every day with some 2,000 lbs. of fish, that is 1,000 lbs. for each man.

Bank fishing is carried on with lines from 600 to 1,200 fathoms long, having an anchor at each end, to

[2]J. M. Clarke, "Sketches of Gaspe," Albany, 1908.

which buoys are attached. These lines are left from six to eight hours in the water, and at certain seasons, especially in the month of September, two men can in a few hours take as much as five or six thousand pounds of cod with a line 500 fathoms long. From the 15th June to the 15th October, two men fishing on the banks can catch 600 quintals.

The fishing season usually lasts from the month of April to November. This period is divided into the "summer fishing" and the "fall fishing." The former ends on the 15th August. The fish taken up to the end of September is dried or prepared for export; that caught after the latter date, is salted, barrelled and sold on the local markets.

As may be seen, cod-fishing is a very lucrative occupation and can easily bring in from $300.00 to $400.00 per summer to an active and hard-working man.

Herring fishing lasts from April to December, and is carried on with nets generally thirty fathoms long and five or six wide. They are set vertically, at spots where shoals of herrings pass, and overhauled every morning for the purpose of removing the fish. In the spring, when fishing is good, from five to ten barrels (of 200 lbs.) of herrings are caught every night in one net.

It is almost impossible to form an idea of the abundance of herring. In the spring they move in such serried shoals along the shore that the pressure of fish on one another, and the action of the waves, kill them by thousands. Dr. Fortin, who was for many years charged with the protection of the Gaspe fisheries, said that he often saw the beach covered for many miles with a layer of herring spawn two or three feet thick. "This," he adds, "may perhaps astonish some people, but they will soon realize it when they remember that the female herring carries from six to eight million eggs in her ovaries.

Weighing Fish

Mackerel are canught with nets or lines, the former being done in precisely the same manner as for herring. For line fishery, hemp or cotton lines from six to eight fathoms long are used. The hook is baited with a small piece of skin from a mackerel's neck,

both fishermen takes two lines and when the fish bite well a crew of fifteen men can catch in six hours from twenty to thirty barrels of herring, which sells from eight to twenty dollars per barrel, according to quality.

Lobster fishing is a very lucrative occupation. It is carried on only in the Baie des Chaleurs, as lobsters are not found on the shores of the Gulf of St. Lawrence, forming the northern boundary of Gaspesia. This fishing is very easy and is done with wooden traps closed at both ends by a kind of net with a small opening in the middle, a piece of fish being suspended in the middle of the trap as bait. The lobster easily passes through the opening to reach the bait, but cannot get out again. The trap contains a stone, which keeps it at the bottom, and to which is attached a rope fastened to a buoy floating on the top of the water and which is tied to a long line or cable holding all the traps. These lines are sometimes hundreds of yards long, according to the length of the fishing grounds. The fisherman visits his traps a cuple of times a day, proceeding in his boat to the first line, and overhauling the whole line. By means of the rope attaching the buoy to the trap, he hauls the latter to the surface, and if there be one or more lobsters in the trap—for several are often caught in the same one—he opens the top of the trap, catches the lobsters by the beard and throw them into his boat, then he replaces the bait and lets the trap sink.

Salmon are caught in nets stretched along the sea shore, in bays and especially at mouths of rivers. At high tide the fish pass above the nets to get near the land, or ascend the rivers; then, when the tide recedes they keep away from land and make for the sea, when their passage is intercepted by the nets, in whose meshes they are caught and remain until the fisherman comes for them.

* * *

During the last half of the past century the Robin Co. had many competitors: the Hymans, Le Bouthilier Brothers, Marquard and Co., Copy, Le Bas, the Peree Fishing Co., C. Biard and Co. Some have disappeared, but others still exist.

The principal concern now engaged in the fishing business is that of Robin, Jones and Whitman. Its head office is at Halifax, and its branches cover the entire shore of the Baie des Chaleurs. In addition to its fishing, it also carries on a large trade in dry goods, etc., and has at Paspebiac the most important department store in the district of Quebec, outside the city of that name. The old house still exists at Paspebiac, with many other branches. Fruing and Co. are installed at Grand Greve and also have many branches. The Gaspe Fish Co. should likewise be mentioned as well as Wm. Hyman and Son, C. and H. Kennedy and Leonard Bros., whose headquarters are at St. John, N.B., J. W. Winsor has many lobster canneries in Gaspesia. There are also a large number of merchants who buy fish directly from the fishermen and ship them to wholesale merchants in Quebec, Montreal and the Maritime Provinces.

Thus, as may be seen, we are very far from the days of the Robins' monopoly!

* * *

Lastly, it should be stated that the Gaspesian fisheries give employment to nearly ten thousand persons. The aggregate value of fish sold from the countries of Bonaventure and Gaspe averages $1,225,000 per year.

A large quantity of fresh fish—the whole of it, in fact—is exported to the United States, salmon being the chief kind so disposed of. The value of that sold last year was $1,225,000. The other fresh fish marketed in the United States were haddock, herring and lobster. There are also eighty freezers or cold storage warehouses in Gaspesia. Many readers of "The Canadian Fisherman" will be surprised to learn this, especially among consumers, many of whom have never heard the Gaspesian peninsula spoken of otherwise than as a dry or salt cod country. However, the fish merchants of Quebec and Montreal have not the same excuse as their customers. We have never understood why they should seem to ignore the Gaspesian market.

* * *

In Gaspesia there are two fish hatching establishments; one for salmon at Gaspe, and the other for lobster at Port Daniel.

In his report for 1911, Mr. R. C. Lindsay, the superintendent of the Gaspe fish-hatchery, states that he put 1,845,000 salmon fry in the St. John (Douglastown), York and Dartmouth rivers. Those put in the same rivers in previous years gave the most satisfactory results, and both rod and net fishermen had fine catches.

The establishment for the artificial reproduction of lobster at Port Daniel West has been in existence only since 1910, and already, in 1911, the number of young lobsters put in the sea at Pabos, New Port, Shigawake and Port Daniel Bay, was put down at 12,000,000. Mr. Edward Dea is the superintendent of this establishment.

It should likewise be stated that the very important Ristigouche establishment at Flat Lands, N.B., carries on its operations to a considerable extent, at the head of the Baie des Chaleurs, chiefly in the Ristigouche and Matapedia rivers.

The inspector-general of fisheries for the Gaspe district is Dr. Wakeham of Gaspe.

* * *

The Gaspesian fisheries have the two-fold advantage of offering kingly sport for those who like it—even for millionaires—and an important source of revenue for those who engage in them.

The finest salmon rivers in the Province of Quebec are in Gaspesia. Some are leased to celebrated clubs, such as the Matamatijaw, Cascapedia, Bonaventure and Ste. Anne des Monts. These exclusive clubs have luxurious houses. There are still, however, many places where fishing is free, and tourists as well as natives of the country can enjoy this royal sport in all freedom.

JAMAICA FISH MARKET.

(Special Correspondence.)

The market has been for the past three weeks in such an over stocked condition, that fish has been sold at any price, and it has been pretty difficult to arrive at the market prices.

By cable advices, we understand that the markets both in Halifax and Newfoundland have considerably declined on all descriptions of fish stuffs, and it still looks as if prices are likely to go lower. At the end of the month I anticipate that our market will show some change, and by then it is hoped to be able to furnish some further particulars.

Who's Who in the Fishing World

"It's a long, long way to Tipperary!" but D. J. Byrne declares emphatically that it is not half as far as the distance he used to have to walk to school, when he was a lad trudging from Point St. Charles, away up on Ontario Street. There were no barrack room ballads or soldier's songs to enliven the long march to school and back again. Being a good soldier, he stayed with the game until he was fifteen years of age, when he forsook his studious Irish habits and adopted the Scotch one of money making. At that age, he entered the employ of Leonard Brothers, Wholesale Fish dealers, and has stayed with them ever since, working his way up from office boy and general factotum to a partnership in the business.

"Dan" Byrne, as he is known to a host of friends, was born in Montreal in 1871, educated in the schools of the city and spent his entire life in Montreal. He entered the employ of Leonard Brothers in 1886 as a lad of fifteen, and to-day looks back with pride on the

twenty-eight years he has spent with the firm, as during that period he climbed from the lowest rung in the ladder to the top. With him, there was no royal road to learning the details of the wholesale fish business. He started in at the bottom and mastered each branch of the business, until to-day he is recognized as one of the leading authorities in the fishing industry. As a matter of fact, he is a member of the board which is appointed by the local Board of Trade to settle disputes in connection with the fish and oil trade, and is one of the two Canadian directors of the Oyster Growers and Dealers Association of North America. He has been for twenty years a member of the Montreal Board of Trade, and is the managing partner in Leonard Brothers, wholesale fish dealers, with offices and plants at St. John, Montreal, Grand River and Gaspe. The company own their own fleet of boats in which they fish off the coast of New Brunswick and Nova Scotia, then pack, cure and smoke their catch for both local and foreign trade, and altogether do one of the biggest businesses of its kind in the country. They carry on an extensive export trade with the West Indies and Brazil, while their fleet of boats and their packing houses and fishing stations, scattered up and down the coast, enable them to keep in the closest possible touch with the whole fishing industry. Their branch in Montreal is largely a distributing one, supplying the important local market with everything in the line of fish. Mr. Byrne is the resident partner in Montreal, while Mr. W. F. Leonard, the senior member, resides at St. John, where he looks after the catching and curing of the fish.

There is only one thing Dan Byrne does not know about the fishing business and that is how to bait a hook and catch a fish. He is not a disciple of Isaac Walton. Fishing with him is a business, not a pastime. He is a member of the Kaneron Fish and Game Club, but is down on the books as being the only member who never caught a fish. He is too honest to catch suckers in the business world and too busy to catch fish in the holiday world. As a matter of fact, he does not take holidays. His only hobbies apart from work, are his home and his horses. The former is presided over by a beautiful and charming lady, who assisted by "John," the son and heir, has done much to contribute to the material success of the subject of this sketch, while "Dolly," the fast stepping favorite driver, has a big place in the affections of her kind-hearted owner. His fondness for horses is further shown by the fact that he is an active member of the Society for the Prevention of Cruelty to Animals, and he never loses an opportunity to befriend dumb animals.

Our genial friend has but two ambitions in life; one is not to live in Westmount and the other to have a law passed by which there will be two Fridays appear in each week. He does not state whether he wants Monday (wash-day) abolished or Sunday, but is not very particular so long as an extra fish eating day can be worked into the calendar. Mr. Byrne is one of the most popular men in Montreal. His genial smile, his Irish wit and his unfailing good humor make him one of the most desirable types of citizen. Probably the most significant thing that can be said about him is the following:—The writer has known him for several years, and during that time never heard him say an unkind work about any person.—J.C.R.

MONTREAL FISH CONCERN GETS OUT VALUABLE WAR MAP.

A handsome Rand McNally wall map of Europe showing with great detail the countries at present engaged in an endeavor to change it, has been gotten out by Messrs. Leonard Bros., wholesale fish dealers of Montreal. A feature of the map is a list of all the edible fish procurable in the Montreal market printed on it in both English and French. The retailer who caters to customers of either nationality will find this dictionary an invaluable asset when doing business in both languages.

The Government fishery station, which has been established at Newcastle for nearly 50 years, is being removed to Belleville. Alex. D. McLeod is manager.

THF FISH INDUSTRY IN CANADA

By F. J. HAYWARD.

A little medicine is good for everybody at times, whether the necessity for it is apparent or not. The effect of medicine if it is the right sort to suit the particular case, is to drive away the ailment. Those in the fishing business in Canada seem to have to take a lot of medicine, and in the bulk of cases they feel that it is quite unnecessary. The medicine I refer to may be in the form of low prices, glutted markets, scarcity of raw material, etc., etc., Many of these forms may be unavoidable to a certain extent, but still using the simile, they are often aggravated.

It has often been said that we in Canada are behind the times in many matters. I am afraid that I shall upset the susceptibilities of many when I state that the accusation can be applied with truth when we start to consider the fishing industry. Do I not speak the truth when I say that we are content to jog along in the same old way? Late years and the very life of the industry have forced us to wake up a little and to consider other markets. While others were seeking markets and adapting their products to suit the markets they sought, we were packing our goods in the same old methods and then wondering why others got ahead of us. Please understand that I am now speaking in a general way, and not specifying any one branch of the industry. Some branches this cannot be applied to, for we lead all others in many.

But with our vast resources we ought to lead in all branches. The price standards should be set by us, and the available supplies should be estimated by our productions. On the Atlantic owing to the fact that the bulk of the fishing is done in Canadian and Newfoundland waters, Canada does set prices as a rule. But over here on the Pacific our prices for pickled fish in particular, are set by American packers operating outside of British Columbia. Canada was deprived of untold millions of dollars when she lost that Alaskan Peninsular, which shuts off such a vast stretch of coast from British Columbia. Still, without this strip that we would all like to have back again, there is no reason why we should look to America to set our prices and standards of pickled fish. We have equal facilities with our American friends to know what their market requires. We have an open market offering us, and it is our duty to get established on this market. How long it will continue to be open is difficult to say; but if a change of government in the United States repeals this factor of the Underwood Tariff, we should have to be so established that any duty imposed would not affect us at all seriously.

We have not watched the size of the packs sufficiently, nor taken advantage of shortages across the border. As an instance, I may mention our pickled salmon. This as an industry in British Columbia is utterly neglected. We can our salmon and also put up some of the choicest of the springs in a form called "mild cured." The canners as a rule know about how many cases they should pack, and when this limit is reached unless the market takes an extraordinary turn, they shut down. If there are fish still offering, they do not utilise them unless there is a cold storage attached to the cannery, when a few thousand are frozen. In Alaska they pickle the surplus, thus making the pickled fish a kind of by-product. Those of us who do go to the trouble of packing pickled salmon, want a price to pay them a profit. If they ask this, their goods are too costly compared with the Alaskan fish. By running the two forms of pack together, each can be done cheaper than alone. On top of this there is another factor that calls for strong medicine. This was not a very large year on Pinks, still there were enough offering to pack many hundred barrels. I personally got after many people to do this while the fish were to be had, and was told that there was nothing to be made from so doing. I pointed out the reports from Alaska, but still had no success. What is the result? To-day pickled Pinks are worth money. The pack is almost a blank Alaska, and those who carried over from last year owing to disability to sell, are now getting prices beyond their highest hopes. I merely give this case as an instance of how we in Canada fail to accommodate ourselves by taking advantage of short supplies in other markets. Case upon case may be given of the same sort of thing happening. Then when we do see the price to be obtained, we sit down and wonder why we did not pack some of the desired article before it was too late.

A lot of this can be avoided by careful watching of the supplies offering. It is no use to leave this study to the large operators. They are helpless unless the fishermen will take the trouble to catch the fish. Perhaps in the rosy future when our Government is not bothered with wars, we shall be given a bureau where we may obtain at all times details of the supplies offering and packs being made in our competitors' countries. It is not of much use to have full details and statistics after the season is over. In case of a short pack, we cannot then reap the benefit if our season is also over.

Along with this I say that there is too little study given to the way that we do pack the goods we have to offer at the end of the season. In reply to such question as to what the exact weight of the goods is, what size the sides of the salmon, what count to the barrel, how many herring to the barrel; all we can give is a vague approximate reply in almost every case. This will be bettered when the Pickled Fish Inspection Act comes into force. By the way, it should come into force literally, and be compulsory. A careless packer hurts many others besides himself, and should be supervised for the sake of his fellow packers.

We must drive out of our system the idea that we know how to pack goods better than anyone else. When we purchase an article we take care to get what we want and ask for. The man who gives us what he wants to instead of what he is asked for, loses us as a customer next time we are in the market. This can be applied to almost every industry, and the secret of success in new markets, is giving that market what it wants. It is easier to sell a man a brand of tobacco he is used to than a plug of goods he has never heard of before.

To go into full details of every pack of fish that this rule can be applied to is too lengthy a job for any-

one. But to give the Atlantic a crack also I will suggest that mackerel packers of those waters let us know the count of fish to the barrel with some idea of certainty. Buyers want to purchase on that basis, not on an approximate one. If these packers charged a little more for the pickled fish and gave a better barrel, there would also be less kicks. To-day with the great European sources of supply closed to the United States, Canadian herring and mackerel ought to get established. But I am afraid that this war will have to keep on another year to allow us to benefit by mistakes made this year. We should have been ready for such an eventuality by having a thin edge already in that market. But, no; San Francisco, Portland, Seattle, and Tacoma prefer to pay outrageous prices for Norwegian goods, rather than buying Nova Scotia herring and mackerel packed and cured any way, but what they require.

To overcome these obstacles looks impossible where the individual fishermen packs a few barrels with the means at his disposal. It will be necessary that standards be made and kept. This only looks possible by means of large packing plants where hundreds of barrels may be packed simultaneously. This time is coming, and soon I hope.

FISHERMEN AND WARFARE.

The present war will remain memorable in the annals of the world for the ferocity with which it has been waged and not the least amazing thing which has come to light among the conflicting reports which reach us from the theatre of action, is the destruction by German cruisers of English trawlers, in the North Sea. For generations it had been looked upon as an established doctrine of maritime law that peaceful fishermen were not to be molested in time of war. In the course of the long wars between France and Great Britain, the rights of fishermen were seldom allowed to suffer by reason of hostilities and, upon several occasions, when naval officers interfered with the peaceful prosecution of the fisheries, orders were promulgated to fleet commanders not to detain vessels exclusively engaged in fishing. France, during her long years of strife with her present ally, invariably recognized the neutrality of the fisheries and even when political exigencies compelled the expulsion of foreign fishermen, the latter were always granted a safe-conduct to ensure their return home unmolested. Even then the expulsion of fishermen was explained on the ground that it was necessary to guard against spies, who, under pretense of fishing, were employed by an enemy. During the American war, the French King XVI. wrote to his High Admiral under date of June 5, 1778, that commanders of ships, privateers and cruisers should not disturb the vessels of English fishermen, "not even those laden with fresh fish, though they may not have been caught by these vessels, provided always that they are not armed for offense and are not convicted of having given signals that might show a suspicious intelligence carried on with the ships of war belonging to the enemy." In the month of March, 1797, the French Government authorized the municipality of Calais to open negotiations with the English commandant at Dunes for the full liberty of fishing to the distance of three leagues from the coast and throughout that period the French made it a practice to send back without exchange all the English fishermen on board English vessels in French ports, not considering them as prisoners.

This consideration of the rights of fishermen was but an implied expression of that regard which ought everywhere to be shown a class of men whose arduous labor is entirely foreign to the operations of war. In times of greatest discord, during years looked upon as barbaric by the military philosophers who wrote the German naval text-books, fishermen were invariably spared and protected from hostilities, and were allowed to live in the midst of public dissentions as if their respective nations were at peace. Writing in the 14th century, Froissart said: "While Charles VI made great preparations at L'Ecluse, in order to have good fishing the English often went to fish below Boulogne and before the port of Visaut. For fishermen (though there may be war between France and England) never injure one another; they remain friends, and assist each other, in case of need, and buy and sell their fish, whenever one has a larger quantity than the other; for if they were to fight, we should have no fresh fish." —Shipping Illustrated.

FISH OILS.

Roughly speaking, the flesh of fish having livers rich in oil (for example, cod) is almost devoid of oil, while fish with oily flesh possess livers which contain only a small amount of oil. The oils obtained from fish may consequently be divided into (1) fish liver oils, the most important being cod liver oil, and (2) fish body oils, of which menhaden and herring oils are produced in large quantities. Fish oils, like vegetable oils, are employed in soap and glycerine manufacture. Fish oil "stearines" of pale color can be used in the manufacture of soap of fair quality, while the lower grades of fish oil can be used directly for making soft soap, after hardening by "hydro-genation" for hard soaps. Most fish oils absorb oxygen from the air, that is, are "drying," but they do not as a rule yield sufficiently tough films to render them suitable for paint manufacture. Some fish oils can be used, however, when mixed with linseed oil, for this purpose. The fact that fish oils absorb oxygen and become gummy renders them unsuitable for lubricating purposes. Fish body and fish liver oils are largely used in the leather trade for the manufacture of chamois leather and for dressing and currying leather. Fish oils are also employed in tempering steel. Large quantities of certain oils are employed for "batching" jute and other fibres. The possibility of using fish oils for food purposes depends on the removal of the fishy taste and smell. It seems probable that the recently introduced process of hardening liquid oils by hydrogenation may prove effective, as it is stated that the odor of fish and whale oils may be completely removed by this means.

CREDIT WHERE CREDIT IS DUE.

"Railroad men have so many knocks that I want to throw one bouquet. The Intercolonial is operating an excellent service between St. John and Montreal, and have no doubt other portions of the line are equally well served. You have the best class of sleeping and parlor car conductors it has been my good fortune to meet, and your dining car employee's food and service leave nothing to be desired."

An officer of the Canadian Government Railways received the above from a much travelled official of one of the most important railways across the border.

THE ATLANTIC FISHERIES

ATLANTIC COAST FISH INDUSTRY IS GROWING RAPIDLY.

(Special Correspondence.)

Halifax, N.S., October 20th.—For the past few years the Department of Marine and Fisheries has been endeavoring, and with marked success, to develop the trade from Canadian Atlantic ports to the interior markets, such as those of Montreal and Toronto, were being mainly supplied from United States ports and in some instances with fish which were first imported into that country from Canada. That condition of affairs has been stopped and the markets have been very largely expended. Last summer the service was extended by the running of a cold storage express car one day each week from Mukgrave and Halifax to Montreal, for the transportation of fresh fish, and it is probable that arrangements will shortly be concluded whereby a similar service will run through to Toronto. The coast line of the Atlantic provinces, from the Bay of Fundy to the Straits of Belle Isle, without taking into account the lesser bays and indentions, measures over 5,000 miles, and along the great stretch is to be found innumerable harbors and coves, in many of which valuable fish are taken in considerable quantities with little effort. Last year the total value of the industry was $33,389,461. The year before it was $34,667,872. This includes salmon and halibut fisheries. The total for 1911-12 was $4,702,439 greater than any other previous total, so that the result for last year is greater than that for any other year. To the total the sea fisheries contributed $29,315,772, and the inland fisheries $4,073,692.

These results were produced by 65,081 fishermen, who manned 1,669 vessels, and tugs, and 34,501 boats, together with 23,327 workers who were employed on shore in the various canneries, fish houses, etc., preparing the fish for market. The total capital invested in Canadian fisheries was $24,388,459.

YARMOUTH, N.S.

(Special Correspondence.)

Now that the fall is here with its herring and haddock, the fishing industry has shaken off the lethargy which has settled down on it during the last few months. July, August and September were rather dull from the fisherman's point of view; neither the boats or the vessels did anything during that period owing principally to the prevalence of dog-fish. This year they have been more plentiful and more destructive than usual. We have not had the usual fall run of mackerel and the run of hering was late. At the present time, however, large numbers of this fish are being taken which makes the bait outlook for the coming winter encouraging. The near approach of the lobster season is causing a little stir all along the shore. The first evidence we newspaper men in Yarmouth see that the lobster fishery is drawing near is in the arrivals and clearances at the custom house. Commencing about the first of September we see the arrivals of small coastal packets from the south shore, and then note that, instead of clearing to return, they have cleared for North Shore, News Brunswick, or North Head, Grand Manan or some other point in that neighborhood where they usually go for lobster bait. These are followed a few weeks later by one or two of the steam smacks which come out of their summer quarters and commence to make irregular trips to the Tusket Islands, Clark's Harbor, carrying supplies from one place to another, making arrangements to transport the fishermen and other work incidental to this great industry. But the outlook for the coming season is not too bright, by any means. The present unhappy state of affairs in Europe has closed one of the biggest markets of our lobster packers—Hamburg—and rendered another — London — more or less uncertain. Of course, it will not interfere with our great live lobster industry—the United States will still take all the live lobsters we can ship. It is the packers who stand to suffer the most and after all, to the fishermen it may be a blessing in disguise. These lobster factories take every year hundreds of thousands of immature lobsters and if, as the talk is at present, many of these factories will not open, then the fisherman will have to throw these little ones back.

It is a standing joke in Yarmouth that during the lobster season lobsters are too high for the ordinary man to buy and that we cannot afford to eat lobsters until the closed season comes on. And it's true, too. In the legal season we can only get the smallest, and they are three for twenty-five cents: in the closed season good big ones can be had at seventy-five cents a dozen (if you know where to get them). There is always a lot of illega lfishing, and this year there seems to have been more than usual. One or more of the patrol boats has been off and on all summer, and she has destroyed a large quantity of traps and gear—sometimes a hundred in a day. In Yarmouth one fisherman had his boat confiscated, but redeemed it by paying a rather heavy fine. There was a lot of talk about the so-called "injustice" of that fine, too. It was pointed out that the man fined was an old man who only caught a few lobsters to help out in making a living and dozens of others, young, able-bodied men who practically did nothing else but catch them for a living were allowed to go scot free. One man has told the writer that if he was not allowed to catch lobsters all the year he would "put his family on the town."

Within the past two or three weeks the Digby schooners which give us the "go-by" in the summer,

have commenced to make this port their headquarters again for the winter. So far our local buyers have not shown any great desire to handle their fares, but they probably will, as the colder weather approaches. The buying of vessel fish will be between the Consumers' Fish Company and Henry A. Amiro, and it will be bought principally for export. The Gateway Fish Company at present is not shipping fresh fish but they may do so later. Just now they are manufacturing entirely, and they prefer boat fish as being fresher and more suited for their purposes. On Sundey, October 18, there were fifteen fishing vessels lying at anchor here, showing that the haddock season has opened. Most of our small boats have hauled up for the winter. In some cases it is because the men have shipped on some of the larger vessels, but in in other cases, perhaps, "that tired feeling" has something to do with it. The premature hauling off of the boats crippled the Gateway people to such an extent that they were forced, in order to get fish enough to keep them running, to engage a number of Digby motor boats to come here and fish for them at least until Christmas. Several have already arrived and are said to be doing fairly well, although a little gear has been lost through not being acquainted with the grounds. The company has fitted up a bunk-house on their wharf for them, and this house has accommodation for thirty-two.

Henry A. Amiro has sold one of his fleet, the Edith F. S., to Wesport parties, and it is said, will have a new one to replace her. Mr. Amiro's fleet has done well this season and those who are watching the resuscitation of the fishing industry here are rejoiced to see it.

At the local exhibition the Gateway made a great show and captured prizes on about everything they took out to the building.

The exports during the past few weeks have been as follows:—

Fresh Halibut, cases	140
Fresh Albacore, cases	289
Fresh Swordfish, cases	173
Fresh Mackerel, barrels	429
Boneless Fish, boxes	918
Salt Herring, barrels	1,337
Fish Waste, barrels	132
Dry Salt Fish, drums	2,063
Pickled Fish, cases	750
Canned Lobster, cases	1
Smelts, boxes	3
Fresh Fish, cases	10
Dry Salt Cod, drums	1,376
Clams, barrels	801
Eels, barrels	29
Cod oil, barrels	52
Hake Sounds, bags	364
Boneless Cod, boxes	3,058
Dry Pollock, cases	12
Salt Mackerel, barrels	205
Finnan Haddies, cases	30
Fresh Haddock, cases	2
Fresh Cod, cases	4
Fresh Whitefish, cases	13
Dry Salt Haddock, cases	140

To Havana:
67 drums Dry Salt Fish.
To Brazil:
100 drums Dry Salt Fish.

CANSO, N.S.

(Special Correspondence.)

Before opening up my budget this month, I must make a slight correction in that of the preceding issue. The name of the steam trawler landing here appeared as "Reynard." It should have been "Rayondor."

The swordfish season in this vicinity has just drawn to a close. After October comes in, very few are in evidence among the fares landed. The closing season has been a successful one all round. The quantity secured has been fairly large, and the prices obtained up to the average. It is rather interesting to note that the swords have been in good demand, and incilentally turning in an odd dollar. Cleaned by being towed for some time through the water, then shaped up and neatly fitted with soft or hard wood hilts, they make very attractive-looking weapons.

The American sword fisherman "Yankee," Capt. Ben Lumsden, has been in port a number of times since the run of swordfish has been on. Capt. Lumsden is a Canso boy who has "made good" as a skipper. He is uniformly successful both in getting the quantity and generally in striking a good market. I am told that the present season he is making a close run for high line.

The yacht formerly owned by Prof. Porter, who has a summer resort in this county, was bought recently by P. T. Smith, of the Portland Packing Co., who after installing a gasoline engine, converted her into a fishing craft, with Capt. Lewis Munro in command.

About the middle of September, dogfish were reported plentiful off Port Hood and Louisberg. Of course, by the end of the month they had reached Chedabucto Bay. A long dry spell of weather had left the Dogfish Reduction Works without the necessary supply of water, but fortunately, just when needed a heavy rain brought relief and so the plant was enabled to commence operations early in October. In spite of rather windy weatherup to date, the fishermen have kept the works busy with a good supply of the "dogs" for which the usual price of $4.00 per ton is being paid.

During the heavy wind storm of the last days of September, E. K. Goodwin unfortunately lost his trap, which was set off French Point.

NEW BRUNSWICK NOTES.

(Special Correspondence.)

On the whole, the sardine fishing season in St. John and Charlotte counties, which began so badly, has turned out very well for the fishermen. Owing to the high prices which canners were paying August and September it is estimated that the value of the catch to the fishermen during those two months was greater than the value for the whole of last season. This year the canners frequently paid $25 and $30 per hogshead; last year the price was generally around $6. During the latter part of September of this year the price dropped to $10.

It is believed that when the season is complete it will be found that the quantity of the catch this year was fully up to the average. Stories have circulated in the papers to the effect that wier men have made fortunes catching sardines this year. Some wiermen have made big money, but some of the stories of their fabulous gains need to be taken with about a bushel of salt.

The big plant of the Canadian Sardine Company at Chamcook which has been idle all summer, was recent-

ly sold at auction, and bid in by the Bank of Nova Scotia. Whether the bank has any prospects of selling the plant to a firm that will operate, it is not yet known.

One of the sardine packing companies in Charlotte county has secured orders for considerable quantities of sardines for the British navy, previous sales to the navy having been very favorably reported on.

Herring fishing on Grand Manan has not been as good as around Deer Island, Campbello and points in Charlotte county.

ST. JOHN, N.B.

(Special Correspondence.)

In the local salt fish market prices continue on about normal levels, but dealers regard the future as uncertain. High rates of exchange and the slump in the prices of fish in some West Indies markets are having a sad effect on the export business at present, and generally speaking the export trade governs condition in the home trade. Some dealers are of opinion that the effect of the war upon the salt fish business will be favorable before the winter is over, as European countries may be looking to Canada for fish, and people in this country may be seeking to economize by using fish more largely. But others say that speculation about the future is idle, as the business is confronted with altogether too much uncertainty.

Harbor fishing is practically over here. Some of the sardine weirmen did very well, but the catch at this point was generally below the average. The fresh market has been well supplied. Wholesale quotations here are:

Fish.

Small dry cod	4.50	0.00
Medium dry cod	5.50	5.75
Pollock	3.50	3.75
Grand Manan herring, half-bbls	3.00	3.35
Smoked herring	0.15	0.16
Pickled shad, hlf-bbls	8.00	12.00
Fresh cod, per lb	0.03½	0.04
Bloaters, per box	0.80	0.90
Halibut	0.10	0.15
Kippered herring, per dozen	0.00	0.90
Swordfish	0.12	0.13

DIGBY, N. S.

(Special Correspondence)

During the past month the dry fish stocks here have been gradually diminishing, and what is left is in excellent condition as a result of the very fine weather which prevailed the last few weeks. For the past three or four months large fields of fish, which almost seeme dto be a part of the natural landscape, having been dried by the same Summer Breezes which delighted the Digby tourists, are now being packed in drums and shipped away. Heavy shipments of Finnan Haddies have also been under way; one of the firms averaging an output of almost a carload a day since the season opened.

In order to make sure of a steady supply of haddock this season the Maritime Fish Corporation has engaged the steam trawler St. Leonard to supply them in addition to the fleet of sailing vessels. This craft has certainly helped them out wonderfully so far this season, giving them a good supply of haddock while the local fishermen report that fish very scarce. The St. Leonard is one of the most up-to-date English trawlers afloat. She is 135 feet long, 24 feet beam and 280 tons gross, and is commanded by Capt. G. Myhre. The St. Leonard has established a new record of discharging fresh fish at Digby, having weighed out in one hour 28,000 lbs. which was done without the use of a fork. Incidently the writer may say that Capt. Myhre has had word from England, that some wreckage and life buoys of a sister ship of the St. Leonard have been picked up recently in the North Sea.

Reports from Freeport, Tiverton, Centreville and other fishing ports along the shore state that haddock are very scarce or very late this year in striking in the Bay, and comparisons with last years catch confirm these reports.

October 5th, Schooner Hattie Loring arrived with a cargo of salt from Halifax, and sailed again on the 14th with a load of salt cod for Portland, Me., Schr. Trilby sailed from here on the 13th with a cargo of salt hake for Boston. Schr. Lloyd has landed a cargo of dry fish from Parker's Cove. Schr. Mary M. Lord cargo of pickled fish from Bay Shore ports. The offshore fresh fishermen have all been "cleared for action" and during the last month have landed here as follows:

	Lbs.
St. Leonard	429,888
Lila Boutilier	179,035
Cora Gertie	38,090
Albert J. Lutz	64,727
Dorothy M. Smart	170,558
Quickstep	50,000
Loran B. Snow	62,550
Dorothy G. Snow	163,880
Grace Darling	40,704
Wilfred L. Snow	14,967

LUNENBURG, N.S.

(Special Correspondence.)

The Lunenburg fleet with one or two exceptions, have all arrived home, and have very small catches, compared to years gone by, owing to the scarcity of bait: in fact, almost the entire absence of squid bait on the banks during the summer. The vessels will average about 800 quintals each, and while some have done fairly well, others will have hardly more than enough to pay their expenses of outfitting, etc.

I enclose herein a list of these, who have reported so far at the Custom House, which will give an idea of the catch. This list includes vessels from the North Bay, which have all obtained full fares or nearly so. As to prices, it is difficult yet to say what they will open at, as the outlook is so uncertain and the markets very much curtailed. There have only been a very few of the new bank fish delivered, and those have been sold at $7.00 per quintal, but we do not think it will be possible to place many at those figures at the present time.

The summer catches of the fleet are reported as follows:—

Lunenburg.

Muriel M. Young, Conrad	550
Ida M. Zinck, Zinck	950
Warren M. Culp, Culp	1500
Amy B. Silver, Silver	1600
Caranza, Conrad	1100
Cecil L. Beck, Beck	1000
Ida M. Westhaver, Westhaver	550
W. Cortada, Backman	950
J. Henry McKenzie, Geldert	300

Wm. C. Smith, Selig	500
Mary and Mildred, Conrad	500
Leta J. Schwartz, Schwartz	400
James Burton Cook, Cook	1200
Lewis H. Smith, Westhaver	700
Arcola, Knickle	650
Lottie A. Silver, Silver	700
Douglas Adams, DeCoursey	600
Wautaga, Backman	750
Edith Marguerite, Himmelman	650
W. H. Smith, Naas	450
W. T. White, Knock	925
Artisan, Walters	1100
Arucania, Hebb	850
Assurance, Zinck	500
Warren G. Winters, Silver	850
Benj. C. Smith, Corkum	850
H. H. McIntosh, Whynacht	400
Marion Adams, Knickle	550
Annie L. Spindler, Spindler	1100
F. M. Toro, Corkum	1000
Earl Grey, Corkum	850
Marion Mosher, Mosher	850
Coronation, Tanner	550
Clintonia, Mack	1150
M. M. Gardener, Backman	1000
Donald A. Silver, Silver	550
Associate, Backman	600
Mary D. Young, Berringer	600
Muriel Walters, Walters	500
J. B. Young, Himmelman	1400
Uda A. Sanders, Spindler	1000
Eva June, Schnare	1200
Lillian B. Corkum, Corkum	1200
Evelyn Miller, Miller	600
Harry W. Adams, Zinck	1400
Muriel E. Winters, Winters	1400
Lauretta Francis, Spindler	900
Henry L. Montague, Knickle	850

LaHave.

Granite, Richard	700
Loyalafi Fralick	825
Cento, Fralick	950
E. B. Walters, Walters	1200
Golden West, Getson	925
Review, Pentz	450
J. W. Margeson, Conrad	1200
Falcon, Corkum	600
Abacena, Sarty	1000
Monarchy, Lohnes	750
Carl S., Schmeisser	1075
Mankato, Walters	900
Electro, Pentz	800
Marina, Greek	800
Ella Mason, Wilkie	600
Guide, Getson	750
W. G. Robertson, Publicover	900
Lowell F. Parks, Parks	450
E. M. Zellars, Greek	850
Vera Himmelman, Conrad	1150
Nobility, Croft	600

Mahone Bay.

Winifred, Ernst	1200
Alfarata, Acker	600
Otokia, Ernst	1000
Pasadena, Wentzel	1100
Grace Darling, Lantz	300

NEWFOUNDLAND FISHERIES.

Statistics and Particulars of 1914 Summer Season.

The Board of Trade has figures of catch of codfish for the various Districts of the Island, up to the 25th of September. All districts are heard from, but St. John's and Fogo, but enough figures are available to give us a fair idea of the aggregate shore catch to the date mentioned. It is safe to assume that Fogo's catch is as large as it was last year, and if this is admitted, the shore voyage this year will be 422,030 qtls., against 507,780 yast year, a difference of 85,750 qtls. in favor of last year. If we allow 50,000 for St. John's district, the total will work out at 557,000 qtls. last year, against 472,030 this year.

Whole Shore Catch.

There has been considerable fish caught around the coast since these figures were compiled, and it will continue to be caught as long as the weather remains fair, and bait can be procured. As our people have become somewhat conservative of late years in estimating their catches, we consider that whole shore dry cured catch to date given above was five hundred thousand quintals. If we have an average bank fishery, and we believe we have, this will mean 150,000 quintals more. (Last year the bank catch was 153,000 quintals.) If to this we add 50,000 quintals caught or to be caught after the 25th of September, we will have a shore voyage of 700,000 quintals, a smaller than average voyage, but not a poor voyage. We are not counting on more than three hundred thousand for Labrador, or 1,000,000 quintals in all, against an average voyage of 1,200,000 quintals.

Catches in Letail.

We give herewith the detailed list of District catches as compiled by the Board of Trade:

District.	1914.	1913.
Pacentia and St. Mary's	37,020	47,880
Burin	95,180	103,265
Fortune Bay	37,520	49,645
Burgeo and LaPoile	34,300	24,760
St. George's	4,845	2,625
St. Barbe	12,165	18,925
Twillingate	24,525	52,575
Fogo	.....	55,000
Bonavista	44,435	57,520
Trinity	23,545	31,905
Bay de Verde	21,300	11,465
Carbonear	1,900	1,310
Hr. Grace	5,800	8,220
Port de Grace	2,600	1,905
Hr. Main	2,400	3,935
Ferryland	11,965	19,845
Straits	7,530	17,000

Labrador Voyage.

According to Board of Trade reports, the following harbors reported arrivals from Labrador up to the 31st of September with their catches:

Port.	Vessels.	Quintals.
Conception Harbor	2	850
Harbor main	1	700
Brigus	1	250
Bay Roberts	7	2,600
Harbor Grace	1	500
Heart's Content	4	780
Trinity	32	13,570
Catalina	5	1,070
Bonavista	3	390

King's Cove	6	1,570
Salvage	14	4,680
Wesleyville	56	20,890
Change Islands	17	5,890
Herring Neck	12	3,640
Moreton's Harbor	9	1,545
Twillingate	13	3,990
Little Bay Islands	12	4,221
Burgeo	1	284
Gaultois	2	200
Belleoram	1	350
Stones Cove	1	250
Total	200	68,220

An average catch of .. .. 341 qtls.

Fish Arriving.

As we anticipated last week, there has been a large number of fish-laden schooners arrived from the outports. The owners of the fish have evidently made up their minds that the man who told them they would get six dollars per quintal in the outports if they held on was deceiving them, and they therefore hurried along to get $6.00 in St. John's before a possible slump in prices arrived. The delay in forwarding to date has lost the country two months' consumption, and if local congestion forces the price down later in the season, the men who held on will know where to place the blame for their losses.

Price of Fish.

Codfish from the outports is coming in pretty liberally daily, and a good article is going at $6.00 in some places. Two or three firms are not buying at that price, and are remaining out in anticipation of a drop in figures. As a matter of fact, the $6.00 is still the figure, the tone of the market is quieter. West India is going at from $3.25 to $3.50, Labrador Shore made $5.50 to $5.75, and Labrador "slop" at $4.25. Cod oil is selling anywhere from $72.00 to $75.00 per tun—iron-bound packages. Lobsters remain the same as when last quoted with very few offerings.—Trade Review.

PROPOSED TREATY WITH UNITED STATES REGARDING BOUNDARY WATERS IS DECLARED OFF.

Hon. J. D. Hazen, Minister of Marine and Fisheries, has notified the United States Government that the proposed treaty between Canada and the United States regarding the taking of food fish in boundary waters is now definitely dropped, and Canada assumes freedom of action to make such regulations of her own as she deems necessary. The treaty was drawn up four years ago by Dr. David Starr Jordan for the nited States and Professor Prince for Canada The Canadian Government agreed to it, but opposition was raised by certain interests in the United States, and the approving of the treaty by Congress was delayed from time to time. The present administration at Washington when it came to power seemed anxious to have the treaty adopted, but the opposition continued and the time limit set by Canada having been exceeded, the Dominion Government has decided to wait no longer. Canadian fishermen were handicapped in some ways, it is said, by the unsettled condition of affairs, and the Government will make new regulations at once.

HERRING AS FOOD.

Expert's View of Its Nutritive Value.

It has been stated that two salt herrings contain as much animal proteid as is needed in the daily diet of an ordinary working man. It is important to consider the value of salted or pickled herring, because in this state of preservation they can be kept for 12 months or more in good condition.

In reply to an inquiry as to the value for food of herring, fresh or in various states of preservation, the Board have received from Professor Hopkins, F. R. S., of the University of Cambridge, whose reputation as an authority upon food values is firmly established, some notes which they are permitted to quote.

Profesor Hopkins states that "the results of several researches made in various countries indicate that the nutritive value to man of the flesh of fish is fully equal to that of mammalian flesh (beef or mutton)." As regards the North sea herring, he states that "when fresh it contains, on the average, 18.6 per cent protein and 3.44 per cent fat. Fresh lean beef contains, on the average, 22.4 per cent protein and 4 per cent fat." Direct experiment has shown that smoked fish is (so far as its proteins are concerned) as freely digested as fresh fish. Salting diminishes it, but not to any important degree." Referring to the changes which herring undergo after pickling, Professor Hopkins says "The loss of nutritive material due to extraction of the fish by the brine is small and negligible. Changes occur in the flesh of the fish after pickling, but if it is eaten within a period of, say, six months there is every reason to believe that it remains wholesome and without any apreciable loss in its nutritive value."

CANNOT RUN FISH TO U.S. PORTS DIRECT WITHOUT TRADING VESSEL CLEARANCE.

Congressman Gardner has sent to the Gloucester custom house a letter received by him from the Commissioner of Navigation which answers some of the questions which were brought up at a conference of vessel owners, fish men and the Secretary of the Congressman, held in Gloucester last July.

The Commissioner's answer is as follows:

1.—If a foreign vessel, after taking fish on the high seas, enters a Canadian port and there changes her documents from that of a fishing vessel to that of a trading vessel, and proceeds with the fish to a port of the United States, the navigation laws would not prevent her entry with such fish.

2.—A foreign vessel cannot take fish on the Banks and proceed direct to a port in the United States. These fisheries are considered American fisheries, and the law provides that only vessels of the United States can engage in such fisheries.

3.—You inquire what would be the fate of a foreign vessel which attempted to enter Gloucester with a cargo of fish, if it was shown that this action was taken through ignorance of the laws and on the advice of Americans.

The question, of course, is not possible to answer, as the action by the federal authorities would depend on the circumstances of each particular case. In view of the wide publicity which has been given to the position of the Department, it is difficult to understand how any companies engaged in the fisheries could claim that they were ignorant of the law, or how Americans interested in the fisheries could give bona fide that entry could be made.—Gloucester Times.

THE PACIFIC FISHERIES

British Columbia Fisheries

The Report of an Industry Valued at Fourteen and a Half Million Dollars.

The report of Hon. W. J. Bowser, commissioner of fisheries for the province, has been issued and forms the most complete and exhaustive report of this nature issued in the history of any province of the Dominion. In it are included invaluable contributions to the marine biology of the coast.

For some time the provincial department has been urging upon the Dominion the necessity for investigating the life history of the food fishes in the Pacific Coast. When no action was taken by the biological board, Hon. Mr. Bowser some three years ago inaugurated a campaign of research. In the report of the department for 1912, reference was made to this and the conclusions of several of the experts were incorporated.

The report for 1913 is comprised in 148 pages exclusive of illustrations which number fifty-seven. In addition a very excellent may upon which is indicated the halibut fishing grounds of the coastal waters concludes report. A paper by Dr. C. H. Gilbert offering contributions as to the life history of the sockeye salmon; one by Dr. Joseph Stafford upon the native oyster of British Columbia, and one by Dr. C. F. Newcombe upon the distribution of sea-lions upon the coast are included in the appendices.

A feature of the report is the appendix of Mr. John P. Babcock, assistant to the commissioner of fisheries, in which he deals with the conditions upon the spawning beds of the Fraser. It will be remembered that in previous announcements the provincial department drew attention to the fact that they had discovered that the upward migration of the sockeye salmon had been interrupted in the Fraser River canyon between Hope and North Bend by railway construction on the east bank of the Fraser. As a result Mr. Babcock points out that the spawning beds which in preceding "big years" have been very abundantly seeled, had suffered greatly. As a result, Mr. Babcock in estimating the size of the next 'big run" which falls in 1917, says:

"These facts, in my opinion, warrant the conclusion that the number of sockeye which spawn in the Fraser River watershed this year was not sufficient to make the run four years hence even approximate the runs even of 1905, 1909 or 1913.."

Some Interesting Facts.

The efforts which had been made by Dr. Gilbert on behalf of the provincial department to solve the life history of that mysterious visitant, the sock-eye salmon, prove very interesting reading. Interesting light upon the growth and development of the Fraser River sockeye is afforded, while the different stages of development are dealt with and interesting facts adduced as to phases of growth characteristic of sockeye migrating to the Fraser Rivers Inlet, Skeena River and the Nass River.

It will be remembered that Dr. Gilbert was the first to elaborate the system of scale-reading as applied to the salmon of the coast. Interesting plates dealing with this are included. A number of Dr. Gilbert's conclusions are summarized as follows:—

(1) "An examination of the Fraser River sockeye run at frequent intervals throughout 1913, the big year of the cycle, resulted in a complete verification of the prophecy made by the writer in 1912 (see British Columbia report of the commissioner of fisheries for 1912, pp. 23 and 63) to the effect that "the enormous numbers of a big year must consist in overwhelming proportions of four-year-olds," inasmuch as "the five-year fish present, developed in their due proportion from the few eggs of an 'off-year,' would be too scattered to produce any effect among the vast hordes of four-year-olds."

Among nearly 2,000 sockeyes of the 1913 run taken at random there were found but three five-year fish. It will be recalled that in 1911 about 46 per cent of the run consisted of five-year fish, and in 1912 about 10 per cent.

The fact that practically the only class of fish present in this run of the big year of the cycle possessed the type of scale which the writer had previously determined to indicate four years of age is sufficient demonstration of the correctness of that determination. In sharp contrast stands the interpretation of the scale adopted by Professor J. P. McMurrich and reaffirmed by him in a recent paper, according to which the Fraser River sockeyes of the 1913 run would have to be considered three-year-olds. To maintain a four-year cycle with three-year fish might well tax the resources of the most ingenious theorist.

Fraser and Skagit Salmon.

(2) The question has been frequently raised concerning the regulation of the Fraser River sockeye to those of the Skagit River, in the State of Washington. In size and general appearance the fish of the two streams are strikingly similar, to such an extent, indeed, that dealers and fish experts generally admit they cannot distinguish the one from the other. Both runs enter the Straits of Fuca and pursue the same course as far as the entrance to Deception Pass, inside which lies the mouth of the west shore of Whidbey Island, but the Shagit fish run earlier in the season, and have, in fact, about completed their run when the advance guard bound for the Fraser makes its appearance. The question at issue is whether the progeny from the two streams join forces in the sea, become indistinguishable, and return indifferently to one or the

other stream, or whether each breed returns to its own river

Examination of the scales had decided the question at once and incontestably. Any ten Skagit River socqeyes of the 1913 run taken at random could be distinguished from any ten Fraser River fish of the same year by the scale-structure, and by the widely differing proportions of the age-groups represented in the two runs. To this can be added the fact that the Skagit River run exhibits no increase during the big years of the cycle, and does not follow in any way the oscellations in that stream.

Distinct and Unrelated.

It is then a matter of practical fish-culture, and can be positively asserted that the output of the two streams is entirely distinct and unrelated, that an increased hatch of sockeyes in the Fraser River will not affect the run in the Skagit, and conversely that no fish-cultural operations in the Skagit watershed will have any effect in keeping up the Fraser River run.

Examination of sockeye scales from all the principal streams of the province during the two successive seasons, 1912 and 1913, has shown beyond question that each of these—Rivers Inlet, the Skeena and the Naas—possesses, as does the Fraser, its own separate colony of sockeyes, which exhibit differences in habit, in method of growth and in period of maturity —these differences persisting from year to year and constituting each of these colonies a distinct diologic race.

This fact disposes effectively of the general question concerning the return of our salmon at maturity to the river-basins in which they were hatched. It can now be affirmed with entire confidence that they do so return, that they are effectively isolated and that they interbreed thus within the limits of their colony. They have in this manner established racial peculiarities, which find expression not only during their sojourn of a year in their native streams or lake, when a peculiar environment might be thought to produce the effect, but also during the three or four years of their later life in the ocean, when it would seem the conditions must be uniform for all neighboring colonies.

That we are here approaching as near as may be the formation of incipient species under the influence of isolation admits no question. Structural features, which are more conservative and resistant, have not been modified, but other peculiarities yield more readily.

Product of Different Streams.

Those who deal with these fish commercially know well that the product of different streams may show wide difference in the size and the proportions of the fish, in the color of the flesh and in the amount of oil which it contains.

The study of the scales opens up an entirely new field of investigation and demonstrates that, from different basins fishes which appear wholly similar to the eye may have had quite dissimilar habits and methods of growth, and that these differences have come to mark the races to which they belong. That a few strays pass from one stream to another is entirely probable. That such is the case has been demonstrated in the Atlantic salmon by marking experiments, but it has also been shown by the same method that a vast proportion return and are recaptured in their native stream. The strays are in such small proportion as not to hinder the effective isolation of the colony.

(4) By means of the scale method of investigation we have been able during the past season to throw additional light on the fate of the young sockeyes after they leave their native streams and enter the sea—a matter of great economic importance. As first shown by Mr. J. P. Babcock in the report of the fisheries commissioner for 1903 (p. 8), the seaward movement of young fish in the Fraser River comprises both fry of the year and also yearlings which have lingered in the fresh waters since the preceding season.

Migration of the Young.

The same condition was demonstrated in 1904 for Rivers Inlet (Fisheries Commissioners Report for 1904, p. 8), and while other observations in British Columbia are lacking, it is probable that the downward migration of young in all the largest rivers of the province consist in part of fry, one and a half inches or less in length, and in part yearlings. The fate of these two groups is universally recognized as a fish-cultural problem of prime importance.

Examination of scales from all important sockeye streams of the province has shown for each basin that adult fish are derived from yearling migrants, to the practical exclusion of those which migrate as fry. Out of some 8,000 sockeyes of the 1913 run, only twelve fish seemed with some probability to have developed from fry migrants. It would seem, then, that with few exceptions the fry of this specie perish after entering the sea. The only alternative to this conclusion is that fry develop in the sea in precisely the same manner, at the same rate, and with all the local peculiarities which mark those of their own basin, which develop for a year in their native lake. To one acquainted with all the facts, such an hypothesis appears impossible and absurd.

The deplorable waste occasioned by the loss of vast numbers of fry can not be checked; it would seem in the case of such progeny as are the result of natural spawning, they can not be held back from migrating as fry, if the instinct seizes them. But the case is different in hatchery practice. Here it is still the custom to release the young as soon as the egg-sac is absorbed and free feeding beins. But in view of the conditions here pointed out it would appear imperative that the fry of the year hereafter should be held in troughs or ponds and fed until midsummer, when the time for downward migration will have passed. They can then be deposited in the lake with full confidence that they will pass to sea as yearlings the following spring."

CARE OF FISH IN THE STORE.

(From the Retail Grocers' Review, Vancouver)

By F. J. HAYWARD

Slowly but surely the public is appreciating the fact that fish as a food in the home, is becoming more and more the general thing. It also appreciates the fact that fish is much cheaper than meat, and the world-wide campaigns are proving that there is just as much nourishment in fish, if not more, than any other food. This is assisted by the fact that fish is put up these days in attractive forms and the old time prejudice against this article of food is gradually disappearing. This prejudice was due to a very great extent to the manner in which the goods were displayed.

I will not mention canned fish in all its forms, for that article needs no more care than tasteful displays

and a little more pushing on the part of the grocer. But these days very few stores are without a stock of pickled and smoked fish. These last two forms call for more attention than the average man believes.

Now, many people are under the impression that smoked fish may be kept almost indefinitely. The mere fact that there is a growing market for smoked fish arises from the nature of the goods. The flavor is a great factor and also smoked fish requires very little preparation before being placed on the table. But if it were understood that this flavor arises from the fact that the goods are what we called mild-cured, and as such ought to be sold quickly and not carried over from day to day, there would be less complaints about the quality. The best rule is to order only just sufficient for the day's requirements, as very few stores have any facilities like the packers have for keeping the smoked fish at a temperature suited to keep the goods fresh.

Finnan Haddie is a great favorite in this country, and to tell the truth I know of few more tasty dishes. But we all know that finnan haddie has to be fresh and as dry as possible to be as it ought to. Keep all heat and moisture away from smoked fish, and especially finnan haddies. I have actually seen a box of haddies, as soon as it arrived in the store, placed alongside a stove to get the frost out. Let the frost come out gradually. Keep a sheet of glass over every box of smoked fish, whether it be a box of kippers or a box of haddies. Messy fish are never attractive and fish that have moisture on them certainly do have a messy appearance. Never place a box of haddies or any other fish out in the open, where rain, dust or sun can get at it. Some up-to-date stores find that it pays them to have cooling pipes running through the display case wheer they have cooling pipes running mfw play case where they have their fish and poultry. But this is an expensive matter and in this country a sheet of glass over, and kept over, the first goes a long way towards keeping the contents of the boxes nice and fresh.

Many claims that the packer is asked to adjust arise from carelessness on the part of the retailer himself. It is one of the unfortunate things that the fish curer is up against, and a matter that a little education in the care of the goods will eliminate to a very great extent. I am at the disposal of any grocer in this Province and am at all times willing to either write, telephone or call on him. I have the extension of the business so much at heart that I am only too pleased to give what instruction I have at my disposal to any retailer who cares to ask for it. Instruction in how to buy, what to buy and how to take care of what is bought will go a long way towards making the sales on the goods increase most materially.

Coming to pickled fish under this head, I include the boneless in all its forms, the fish in brine and the hard cured fish. The subject is a very wide one, and space will not allow going into details. If the goods are displayed in boxes, such as the 2-lb. Bricks are, then have a sheet of glass over the box. Do not place the goods near any heat, damp or frost. Boneless fish will keep much longer if thus treated and will not be apt to get spotted and covered with salt. The same treatment can be aforded fish in brine as is now given the pickles, i. e., a glass top be placed over the opened barrel. Always be careful to keep the fish covered with the liquid in the barrel, and a little coarse salt on top of the fish itself will help to keep off any "rust."

Some packers of boneless fish prepare little recipe books showing how to cook the goods tastefully. A few of these can always be obtained either from the jobbers or from the agents here. Some of these booklets put into the envelopes containing the monthly accounts are sure to be appreciated.

Fish is nourishing, cheap and, if properly prepared, tasty.

GENERAL NOTES.

Smoked Fish.

Atlantic Finnan Haddies are now coming through and are to be seen for sale at all the grocers and butcher stores as well as at the fish markets. Western Canada uses quite a number of cars of this fish in the season, and the demand is a steady increasing one. One would imagine that a taste for the Finnan Haddies would lead to more smoked fish of other grades being used. It may be only a matter of educating the people and a matter of time, but the fact remains that Canadians are not very large consumers of smoked fish. On the American side there seems to be a very large consumption of all sorts of smoked fish especially salmon, as is witnessed by the large quantities of fresh salmon shipped into the Sound cities from B. C. especially for that purpose.

Salmon has been plentiful enough to allow curers to take care of their orders, and the same applies to black cod. But owing to the scarcity of halibut and the consequent high prices, curers are not able to produce at the old prices. Shrinkage and other loss in the curing of smoked fish sometimes amounts to 50 per cent, so high priced green fish means high priced smoked fish.

Pickled Fish.

We do not do much with pickled fish in British Columbia as yet. Packers say that as they can get better prices for the fish fresh, frozen or canned and to go to the trouble of pickling fish is not worth their while. That this branch of the industry will receive its proper attention soon is generally recognized here. Our cod is not sought in sufficient quantities to warrant the erection of plants for preparing the fish. The competition from the Alaska packers is too strong to allow us to pack salmon at a profit. The Alaskn packers seem to produce their pickled fish more or less as a by-product. Their canneries and stations put up so many cases of canned goods, and the profit and expenses for the year's working has to be made by the canned goods. Then if there is any fish offering over and above what they pack in cans, these are pickled and so the packers can afford to sell at low prices.

Salmon.

This season has seen a most abnormal situation on the coast. Canners were taking all the "pinks" they could get. These "pinks" or "chums" were shipped into the Sound to the canneries there in hundred ton lots and fetched as high as 16 cents each. This has meant that to date the Japanese packers of "dry salt Salmon" for the Orient have not been able to pack. With the fish so high they could not afford to put up the goods and ship them at the prices that rule on these goods. Last season this price varied between $27.00 and $33.00 per ton of 2100 lbs. f. o. b. wharf.

Cohoes are about average, the supply being sufficient to fill local orders. A few cars have been frozen, but not as many as usual. Packers prefer to see their goods sold before putting them into the cold storages. But buyers this season seem to want to wait a little and then buy as they want the goods. There has been very little buying ahead this season.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by London Fish Co.)

Smoked Fish.

Finnan Haddies, Atlantic 15s and 30s	per lb.	.09
Fillets, Atlantic 15s	per lb.	.10
Bloaters, Atlantic 20s.	per lb.	06
Kippers, Local	per lb.	.7
Salmon	per lb.	12-15
Halibut	per lb.	.11
Kippered Salmon	per lb.	.12

Frozen Fish.

Salmon, Steelheads (dressed)	per lb.	.8½
Salmon, Cohoes (dressed)	per lb.	.07
Salmon, Cohoes (round)	per lb.	.06
Salmon, Qualla (dressed)	per lb.	.05
Cod	per lb.	.05
Halibut	per lb.	.08
Smelts	per lb.	.08
Black Cod, Alaskan	per lb.	.08

Fresh Fish.

Salmon Steelheads	per lb.	.08
Salmon Cohoes	per lb.	.06
Salmon Qualla	per lb.	.04
Salmon Red Spring	per lb.	.08
Salmon White Spring	per lb.	.04
Halibut	per lb.	.08
Cod	per lb.	.05
Smelts	per lb.	.08
Herring	per lb.	.04
Soles	per lb.	.05
Whiting	per lb.	.06
Skate	per lb.	.03
Perch	per lb.	.06
Rock Cod	per lb.	.05
Red Cod	per lb.	.03
Bass	per lb.	.06
Black Cod, Alaskan	per lb.	.08
Shad, Columbia River	per lb.	.08
Sturgeon, Round	per lb.	.10
Sturgeon, Dressed	per lb.	.16

Pickled Fish.

Salmon (Sides), barrel 200-lb.	per lb.	.10
Alaskan Black Cod	per lb.	.08
Pacific Whole Cod	per lb.	.07
Herring Local	per lb.	.06
Herring Atlantic	per lb.	.05

Prepared Fish

Acadia No. 2 boxes.	per lb.	.14
do. strips	per lb.	.13½
do. tablets	per lb.	.14
Bluenose	per lb.	.09½
Pilot	per lb.	.08½
Nova Scotia Turkey	per lb.	.0 ½
Pacific Boneless	per lb.	.08½

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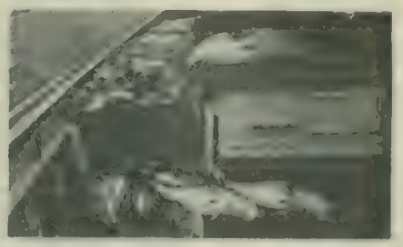

A MONTHLY JOURNAL DEVOTED TO THE COMMERCIAL FISHERIES OF CANADA
THE SCIENCE OF FISH CULTURE AND THE USE AND VALUE OF FISH PRODUCTS

F. WILLIAM WALLACE
EDITOR

The INDUSTRIAL & EDUCATIONAL PRESS, Limited
35-45 ST. ALEXANDER ST. - - - MONTREAL, CANADA

TORONTO OFFICE: 44-46 LOMBARD ST
VANCOUVER OFFICE: 912 DOMINION BUILDING.

Published on the 24th day of each month. Changes of advertisements should be in the publisher's hands ten days before that date Cuts should be sent by mail, not by express. Readers are cordially invited to send to the Editor items of Fishery news, also articles on subjects of practical interest. If suitable for publication these will be paid for at our regular rates.

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Vol. I. MONTREAL, DECEMBER, 1914 No. 12

The Lobster on the Firing Line Again

We liken the lobster to Belgium. The poor crustacean has the happy knack of always featuring in some scrap. The size limit, close seasons, the relations of fisherman and packer in regard to prices, etc., have been the bones of contention in the past, and while these wars have been going on over it, the lobster has been trying to eliminate itself by vanishing altogether.

Since the European dust-up commenced, the Canadian fisheries have been hard hit in a number of cases, but it remained for the lobster to get in the way of the warring nations and let its voice be heard. The export trade in canned lobsters is at a standstill, and with a large portion of the pack on hand, the packers have no desire to load up with more than they can handle. In order to save themselves a close season of one year upon lobster fishing has been suggested. By this, the packers argue, they will be enabled to dispose of the pack they have on hand, and incidentally give the lobster a chance to recuperate after many seasons of hard fishing.

This close season of a year would make hard times for the lobster fishermen who have invested much money in gear and boats and as the United States will probably pass a Bill shortly prohibiting the importation of lobsters less than 10½ inches in length, the fishermen are liable to suffer. In an article in this issue, Mr. L. H. Martell presents the fishermen's view of the case, and suggests a remedy.

Both the fisherman and the packer have their rights in the matter, and the lobster has its rights as well. If we are going to have any lobsters left, a system of conservation must be evolved whereby the crustacean will be preserved for the future. In the lobster fishery and industry there are many knotty problems to unravel at the present time and it seems to us that the only satisfactory way in which the matter can be adjusted is to appoint an Arbitration Board of lobster packers, shippers and fishermen, with a Government official to look after the interests of the lobster itself, and, by thus getting together, evolve some plan which will be satisfactory to all. A Commission of this nature, meeting in a tolerant spirit, will do more to settle the vexed question than by each party entrenching itself and firing newspaper shrapnel at each other.

Scientific Fishing

Dr. Johan Hjort, Director of Fisheries for Norway, is at present over here and has delivered two very interesting lectures in St. John's, Nfld., and Halifax. Those who had the pleasure of hearing his remarks were struck by the scientific and applied manner in which the Norwegians, and other Continental fishermen for that matter, pursued the cod and herring. In both fisheries, a great deal of scientific investigation has been done by specially trained men, and the migrations, feeding grounds, size, and seasons of the fish accurately determined.

This information is passed on to the fishermen, and they are smart and intelligent enough to make use of it to their own advantage. Not only does the Norwegian fisherman catch fish by using the scientific data furnished him, but science has assisted him in

the work of properly packing and curing the catch. Norway herring, sardines and mackerel need no advertising as to quality.

In the packing and curing of fish, especially herring and mackerel, we, in Canada, are beginning to do something along the lines of scientific improvement. The new Fish Inspection Act, effective in May, 1915, will bring good results, and the work of the Dominion Government lecturers, will, undoubtedly, do a great deal to improve the quality of Canadian pickled fish.

Another step in the right direction which we might do is on the lines of scientific investigation of the fisheries of our territorial and adjacent waters. Something of value to the fishing skipper in aiding him to locate the fish without wasting valuable time and effort.

In Canada, with our great fisheries east and west, this is a tremendous task, but if we are ever going to realize our resources, now is the time to start. British Columbia has done a little in investigating the salmon migrations and halibut banks, but apart from the Dominion Government's researches in oysters, lobsters, and some artificial propagation work among certain fishes, we have done practically nothing in scientifically recording the migrations, size, feeding grounds and seasons of such fish as cod, haddock, halibut, hake, mackerel, herring, etc.

Taking one fish as an example. Many Canadian fishing skippers would eagerly welcome information upon the migrations, feeding grounds and seasons of the Atlantic halibut. Halibut is a valuable fish and worth catching and they are plentiful on the banks off the Nova Scotia coast and in the Gulf of St. Lawrence, but very few Canadian fishermen care to fit out a vessel and go after them. If they do take the chance they generally pay dearly for the knowledge and experience they gain. One Canadian halibuter told the writer that it would take him five or six seasons' fishing upon the Gulf of St. Lawrence grounds alone before he could attempt to keep a run of the fish. All his initial voyages would have to be in the nature of experiments, for which he and his men would have to pay.

The U.S. Bureau of Fisheries have a steamer, the "Albatross," which has done some exceedingly valuable research work in locating banks and keeping track of the fish. A similar craft could be utilized in Canada in finding out information regarding the movements and feeding grounds of halibut, herring, cod, haddock and other commercial fish. The skippers of vessels would readily assist the work of the investigating craft and the combined results and observations of all could then be definitely charted and summarized and the information gained in this way given to our fishermen for their use and benefit.

Rome was not built in a day, and no doubt we will do something along the above lines some time, but let that some time be soon.

Giving the Fish Business a Black Eye

Thoughtlessness has caused great injuries. The person who carelessly handles a gun "and didn't know it was loaded" often precipitates a tragedy. The fish business has suffered a great deal through careless, and often unintentional, remarks. The unsubstantiated paragraph about people being poisoned by oysters or canned fish have had serious results to the industry in the past. Fish has had its share of knocks—unjustly so—and when the public are being enlightened to the truth of fish and its good qualities, the foregoing does not assist in clearing the snarls which the fish dealer is up against.

A correspondent writes:—

One has noticed in various papers throughout Canada the following advertisement, the heading of which will be sufficient for our purpose:

"Eat Cabbage, FISH, Sausage, New Bread.
Pape's Diapepsin digests food when stomach can't—
cures indigestion."

Now on the face of this, one is naturally given the impression that Fish is one of the indigestible articles of food that necessitates using the above preparation after eating of the same. We all know that one's digestive organs have to be pretty well tuned up to allow one to eat without fear of future trouble such things—however partial one may be to them—as new bread, cabbage and sausage. But I think I have still to hear of the person, however tender his digestion may be, who has trouble after partaking of fish.

What is the use of the different and most necessary campaigns arranged for the furtherance of Fish as a food staple; what is the use of giving statistics which show the excellent nutrition and digestibility of Fish, when such advertisements as the above are scattered abroad throughout all papers in the Dominion?

It is a recognized fact that goods such as the advertisement in question covers, find a greater sale amongst the very people whom we are all trying to induce to eat more fish. We are not doing this for our pockets alone, but really if we succeed in our object, we shall benefit the pockets of our converts and at the same time cut their drug and doctor's bills very materially. We are after the masses, or in other words those who find that the increased cost of meat makes a factor in their household expenses.

The proprietors of "Pape's Diapepsin" have not included fish as one of the articles that our stomachs rebel against, intentionally. We know that the advertisement is not meant to convey the ideas that all Fish is indigestible. The four articles mentioned may be taken at random. But we wish to have Fish excluded. After eating Fish one needs no assistance to digest the same, so we would suggest that care be taken in in such advertisements. They are apt to undo a lot of good that earnest people in the fishing industry are trying to carry out.

A Dream of the Future

Fishing would be a most lucrative business if every fish which took the hook or the twine were marketable. As conditions rule at present, a very large proportion are not, though there is absolutely no reason why nearly every fish which frequents our waters should not be eaten.

The plague of the Atlantic fisherman is dogfish. When the dogfish infest the grounds, the market fish such as cod, haddock, hake, etc., never get a chance to take the hook. During the dogfish season, the fisherman could easily load his dory with the dogfish on his trawls, but, as nobody eats dogfish, he has to cursefully slat them into the sea again.

Other fish which are extremely plentiful and which have to be thrown away are skate, red perch, turbot, catfish, wolf-fish, and blue shark—all of which are good edible fish for which no market exists in Canada.

The person who will go to work and create a market, or evolve a means of utilizing this waste fish, will be hailed as a benefactor by the fishermen. All the above mentioned fish are good as food and for making glues, oils and fertilizers. The food proposition, as far as they are concerned, has not been given a show so far. As fertilizer, glue, etc., there is not enough money in it to warrant the fishermen bringing the fish ashore.

Scientists have devoted time and money to growing seedless fruit, black tulips, and various other things of minor importance when compared with the problem we have outlined above. Let some of them get to work on the utilization of unmarketable fish. The problem is solvable and offers an interesting study, and if satisfactory results are obtained, thousands of men will find their labor lightened and their appreciation will be an adequate reward to the scientist who successfully accomplishes the task.

Every fish caught marketable! It is indeed a dream of the future, but we trust it will be a dream that is realized.

Canso as a Fishing Port

In the very interesting article by Mr. Cecil Boyd on "Canso and its Fisheries," the author has compiled a splendid record of the history of the port. Mr. Boyd is a resident of Canso and is eminently qualified to write of the fishing industry of his home town.

Few ports are better known to the Atlantic fishermen than Canso. The big fleets, salt fishing, halibuting, and mackerel seining all make Canso at some time or other during the season, and it is no uncommon sight for sixty to a hundred sailing craft to be seen at anchor in Canso harbor at a time.

For years it has been the rendezvous of the Grand Bankers, and we doubt if any other town on the Atlantic seaboard has harbored such a large floating population. In the old days, the arrival of the big fleets meant stirring times in Canso—wild days and nights when the roistering gangs foregathered ashore much as the lumbermen and shantymen of the woods fraternized and caroused in Quebec in the Spring. But, times have changed. The modern fisherman is a quiet law-abiding citizen, and has no desire to come ashore except to the moving picture show, to the Sailor's Rest, or to the Post Office, and the arrival of two thousand men is scarcely noticed.

The elimination of rum and spirituous liquors has had much to do with the change and the town is all the better for it. The same rule holds good everywhere and in everything.

Piscatorial Paragraphs

An English exchange states that the exploding mines in the North Sea have seriously affected the lobster supply in Great Britain. If that is really the case, there may be some prospect for the Canadian article in supplying the deficiency.

* * *

Apropos of our editorial reference to unmarketable fish, the Gloucester Times prints the following which assists in proving our contention:—Commodore Peter Busalacci, chief of the Italian power boat fleet at the Boston fish pier, South Boston, put one over on several thousand visitors to the Food Fair one evening last week, when he served up fried squid, skate, bill fish and horse mackerel. Visitors to the booth of the New England Fish Exchange went into raptures over it all. Squid is probably the ugliest looking fish that swims. After serving a portion of squid, which tasted like chicken, according to those who tried it, the commodore showed the visitors a squid and they almost fainted. But they had to acknowledge it tasted great.

* * *

Canadian clams seem to be in no demand this fall in United States markets. Many shipments arriving in New York had to be dumped. Reports from the Annapolis Basin state that only 300 barrels have been shipped this season compared with over a thousand barrels last year.

* * *

Rough weather has interfered greatly with fishing operations out of Maritime Province ports. The Digby and Yarmouth fleets have made small trips and scarcely paid for the fitting out. Owing to the scarcity of haddock, 2¼ cents per pound was paid for the fish at Digby recently.

* * *

There are few fish foods more palatable than cod tongues and sounds, yet few fishermen bother to bring them in. Of course, it is not altogether the fault of the fishermen. With a fair market for the product there will be no scarcity in the supply as it is an easy

matter for the dressers when cleaning the fish to cut out the tongues and sounds instead of throwing them away. A Newfoundland exchange comments on the matter as follows:—

Fishermen tell us that large quantities of cod heads, sounds and tongues are being dumped into the sea from the fishing stations along this Coast. This treating of cod tongues and sounds as offal is going on from year to year, notwithstanding the fact that there are many ready markets where they would fetch remunerative prices; and the greater the catch and the larger the fish, so is the waste proportionately increased. At this time when salt junk is selling at from 14 to 16 cents per pound, and the price of other food stuffs soaring to the moon, it certainly is a pity that some effort is not being made to utilize palatable by-products of the codfishery.

USE FISH EVERY DAY.

The following is an extract from a letter, signed by Mr. G. W. Perkins, chairman of the Mayor's Committee on Feed Supplies in Uew York, which appeared in a recent issue of the "Brooklyn Eagle,":—

City of New York,
Office of the Mayor.

Editor, "Brooklyn Daily Eagle."—As you know, I am chairman of the Mayor's Committee on Food Supplies. The committee organized and an executive committee was appointed. It has been holding several meetings, conducting investigations, and doing a lot of work during the past week or ten days. At the very beginning I felt that we ought to divide the work into two branches, namely, suggestions for immediate help, and then a more careful and systematic plan for the more serious conditions that may confront us next fall and winter if the war continues.

Among the more immediate things that we can do and are doing is calling the attention of the public to the necessity of using as foodstuffs right now the things that are seasonable and in the market at present. Of these fresh vegetables, fruits, and fish are abundant and cheap. Fish is an excellent substitute for meat, and vegetables are an equally good substitute. We have called attention to this two or three times through the newspaper reporters who called at the office, and the newspapers have been very kind about working the suggestions into their news items, with the result that we have heard from a great many people that our advice was being followed with good results, and urging us to get additional publicity for the ideas we are advancing along these lines.

I am writing you, therefore, to ask if you will be good enough to do all you properly can and keep hammering away at the idea that the people at this time should be using fresh vegetables and not canned vegetables; that fish should be used as far as possible as a substitute for meat; that housewives generally should consider the question of canning and putting up fruits and vegetables for themselves in order to have a stock for next winter's use; and that fish should be every day in the week in place of largely on Fridays, as is now the case.

We believe that editorial notices on this subject by the newspapers and constant reference to it will make a substantial impression and be generally beneficial to the community."

LATEST FISH STORY.

Back to Land Movement by Pike Near Bassano.

The latest fish story that has been sprung on the public—a story which "out-whoops" some of the most famous of the Whopper Club series—is that told by J. Jones, an inspector in the agricultural branch of the Canadian Pacific, whose activities are confined to the Rosemary colony, near Bassano.

There is another of the piking attitude about the story but the fish. The fish were pike. It appears that there has been started among the fish of the Bow River a "back to the land" movement, with the irrigated land preferred. Mr. Jones says that on the land, or on one particular farm, in the Rosemary colony, the water was turned into the ditches one morning for two hours and then turned off. When it had all seeped away into the ground there were enough pike found to feed thirteen men for one meal. Since that time a number of fish have been obtained. In fact, there seems to be a serious sort of mania among these fish to get out of the water at the earliest possible moment.

It appears that many of the irrigation ditches are full of fish and in some places one of the favorite recreations is to go out and "land" a flock of fish for breakfast.

HOW TO SELL FISH.

To attempt to increase the demand for fish along the seacoast and to widen the market for the same inland without a liberal use of printer's ink is as idle as it is for one to try to lift himself by his bootstraps.

Certain rules of business success are as inexorable as the laws of physics.

Producers of breakfast cereals, ready-to-eat soups, etc., who advertise systematically and intelligently in the daily press, do not complain that the market for their goods is restricted.

If the average amount of fish consumed in Massachusetts is under 13 ounces a person a week, as has been declared, and much less in States away from the ocean, the reason lies in the fact that the value of it as a food, which really is high, has never been properly presented to the public through newspaper advertisements well displayed.

Advertising will sell cod and haddock as well as dress goods and real estate.—Boston "Globe."

TRADE INQUIRIES.

The names of the firms making these inquiries, with their addresses, can be obtained only by those especially interested in the respective commodities upon application to: "The Inquiries Branch, The Department of Trade and Commerce, Ottawa," or The Secretary of the Canadian Manufacturers' Association, Toronto, or The Secretary of the Board of Trade at London, Toronto, Hamilton, Brandon, Halifax, Montreal, St. John, Sherbrooke, Vancouver, Victoria, Winnipeg, Edmonton, Calgary, Saskatoon, and Chambre de Commerce de Montreal.

Please quote the reference number when requesting addresses.

1138. **Canned fish.**—A commission dealer in Havre invites correspondence from fish canners and exporters of canned fish of all kinds.

1160. **Canned salmon.**—A Johannesburg commission agent requests immediate correspondence with full particulars for agency in Canadian canned salmon.

A SHORT HISTORY OF THE ATLANTIC FISHERIES

By COLIN McKAY

Shortly after the voyages of the Cabots, the fame of the fisheries on the banks of Newfoundland and along the coast of what is now Nova Scotia began to spread among the maritime nations of Europe, and merchants began to fit out vessels for the fishing there. As early as 1504, seven years after the first voyage of the Cabots, thirty-one years before Jacques Cartier sailed up the St. Lawrence, and one hundred years before Champlain crossed the western ocean, the history of Niflet records that quite a number of fishing vessels from Normandy, Brittany, and the Basque Provinces "went to the coast of the cod, called the Grand Bank, towards Cape Breton, to take cod." The Baccalaos, the name by which Nova Scotia, Cape Breton and Newfoundland, was known to these ancient fishermen is supposed to have been an adaption of the Basque word for codfish, and there is no doubt that the eastern promontory of Nova Scotia was called Cape Breton by the French fishermen after Cape Breton, near Bayonne, in remembrance of their home.

The earliest adventurers were fur traders as well as fishermen, but by the middle of the 16th century the prosecution of the fisheries had become an industry of considerable importance. In 1578 Hackluyte described the state of the fisheries as follows:

"There are about 100 sail of Spaniards who come to take cod; who make it all wet and dry it when they come home: besides 20 or 30 more who come from Biscay and kill whales for oil. These are better appointed for shipping and furniture of munitions than any other nation except the English, who commonly are lords of the harbors. As touching their tonnage I think it may be 5 or 6,000.

"Of Portugals there are not above 50 or 60 sail, whose tonnage may amount to 5,000, and they make all wet. Of the French nation there are about 150 sail; the most of their shipping is very small, not past 40 tons, among which are some great and reasonable well appointed, better than the Portugals and not so well as the Spaniards. The burthen of them may be about 7,000 tons. The English vessels have increased in four years from 30 to 50 sail. The trade which our nation had to Iceland maketh the English are not there in such numbers as other nations."

Before the close of Queen Elizabeth's reign more than 200 English vessels were regularly engaged in the fisheries of Nova Scotia and Cape Breton. At that time Port Inglese, not Louisburg, was looked upon as the headuarters of the English fleet; the French fishermen made St. Annes their principle base of operations, while the Spaniards resorted to the Baie des Espagnols, now Sydney. All the ports, however, were open to the vessels of different nations, and Canso on the mainland of Nova Scotia, was then as it is today, a favorite resort of fishing vessels seeking shelter, water, wood and provisions. As early as 1518 Baron de Lery undertook to found a settlement at Canso, though he did not make much of a success of it, and previous to 1609 Scavalet, an old mariner had made no less than forty trips to this port.

In these days the deep sea fisherman's calling is regarded as sufficiently ardous and hazardous, an occupation demanding courage and hardihood in generous measure. But the European fishermen who in the 16th century sailed across the Western ocean in their little round bellied craft had to contend with perils, hardships and difficulties that the modern fisherman knows nothing about. Imagine them in their unhandy little vessels, about as able to beat to windward as a tub, making their slow way across the ocean, often suffering from scurvy, pushing on to the uncharted coasts of Nova Scotia or Newfoundland, rugged rockbound coasts, shrouded by blinding fogs and swept by treacherous and unknown currents. With the crudest instruments to determine their position, with cruder charts or no charts at all, with vessels whose only salvation when caught on a lee shore in a gale was to find a harbor, the wonder is that so many of them year after year successfully made the voyage across the ocean to catch fish, and knocked about, in fogs and gales, a coast on which were no light houses, fog whistles or other aids to navigation. Certainly they braved dangers and difficulties very much greater than the deep sea fishermen today in their splendid vessels able to claw off a lee shore in almost any gale that ever blew, their accurate charts, sextants and patent logs, have to face.

And at various times too these old fishermen had to face the perils which European wars, carried across the ocean, entailed. While the wars of England, France and Spain were confined to Europe, the coasts of Cape Breton seem to have been generally regarded as neutral ground, and though their countries were almost part in peace and amity. The great English sea kings like Drake, Hawkins and Grenville appear to have considered it beneath their dignity to interfere with the Spanish fishermen, and men of war and privateers of France and Spain did not make a practice of molesting the English fishermen. At any rate while war raged agound the coasts of Europe the number of fishing vessels of the different nations, coming to the coasts of Canada, continued to increase.

When, however, England and France began their long conflict for the conuest of America the truce was broken and collisions between the fishermen of the rival nations became the order of the day. And presently too the Indians began to take a hand, wiping out whole fishing stations, capturing fleets of fishing vesels and massacreing their crews. Near Lunenburg there is an island called Sacrifice Island, which was the scene of a harrowing Indian outrage. Seven fishing vessels from New England which had anchored off the Island had their hempen cables cut during the night, and when they drifted ashore their crews were captured by Indians, and every man was tortured to death. In the same locality is a place called Murderer's Point, the theatre of a similar tregedy.

After the treaty of Utrecht, the English provincials established a fishing station at Canso. On the night of August the 7th, 1720, a party of Indians attacked the station, forced the settlers to take to their boats, and plundered the station of fish and merchandise to the value of $50,000. Three years later the Indians again decended upon Canso, in force, and taking the fishermen by surprise, captured seventeen sail of fishing vessels, and a number of prisoners, nine of whom were tortured to death. A large number of the fishermen then at the station managed to escape from the first attack of the Indians, and a short time later

returned to Canso and attacked the Indians, killing thirty of them, and recapturing seven vessels and fifteen prisoners. Among the Indains were a tribe or tribes known to the fishermen as the Souriuois or salt water men, who knew how to handle sailing vessels, and during the fight they manned ten of the fishing craft and put to sea, taking along with them twenty captive fishermen. They worked the vessels to Lunenburg, landed there and proceeded to get ready to sacrifice their prisoners to the spirits of their tribesmen killed in the conflict at Canso. A great pow-wow was held, and the death dance was in progress when to the great joy of the fishermen awaiting torture and death with such fortitude as they could, an English man-of-war appeared in the harbor. A healthy respect for English men-of-war was entertained by the Micmacs, and the ceremonies incidental to the proposed killing of the fishermen were discontinued. Landing under the protection of the guns of the war vessel, her captain held a parley with the Indians, and made an agreement with them by which the vessels were delivered up and the captives set at liberty, without further fighting. After this tragic business the English authorities stationed a small grarison at Canso, but its troubles were not over. In 1744 the French, assisted by a large force of Indians, captured the garrison and destroyed the town and fishing fleet. At a latter period, during the American revolution the celebrated Paul Jones paid a visit to this port and burnt a number of fishing vessels, while about the same time American privateers captured eleven sail of fighting vessels belonging to Canso, nine of which it is interesting to note were square-riggers.

Throughout the French and English colonial wars the fishermen had to be on guard against surprises, and often they found trouble where they least expected it. In the summer of 1726, a fishing sloop from Plymouth comanded by one Samuel Daley put into the Lunenburg, then known as Malequash, for a supply of water. A Frenchman named John Baptist came off in a boat, and was invited aboard, and given a drink. Leaving Baptist aboard the skipper and several of his crew went ashore to fill their water butts. When they were returning they saw the English ensign had been hauled down, and when they got alongside Baptist appeared at the rail with the ensign about his waist like a sash. Strutting about the Frenchmen invited attention to pistols stuck in his sash after the fashion of a bold bucaneer. Angered, but thinking that Baptist was exuberant with drink, skipper Daley and his men sprang aboard their sloop, and at once a party of Indians leaped from the cabin and confronted them. Baptist was in charge of the ship. While Daley and his men were awey seeking water, the Frenchman's son had come aboard with a party of Indians, and overawed the part of the small crew left on the sloop. Resistance then was useless. Forcing Daley to act as his sailing master Baptist, accompanied by his Indians set out in the sloop for Port Royal. But on the way Daley and his men caught Baptist and his allies off their guard one night, and recaptured the vessel, making their late masters prisoners. Then the sloop made all speed to Boston, where Baptist, his son and three Indians were hung in chains.

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The Lobster Situation in Nova Scotia

(By a Regular Correspondent.)

As the time approaches for the opening of the lobster season on the south shore of Nova Scotia—from the Digby county line to Halifax Harbor—apprehension as to the outlook is becoming more pronounced. What is the outlook? Will the new lobster law in the United States go into effect? Are the canneries going to open? and such similar questions are heard on every side. And all this apprehension is warranted, too. The war has closed the principal market for canned lobsters, and the price has dropped over fifty per cent in consequence. It is certain that some of the factories will close and those that will open will only pay a very low price for "smalls." Last season they were $7.00 per 100; this season, it is said, they will not be over $1.00 per 100. At this price it will not pay the fishermen to catch them, and this has caused one of the leading fishermen to come out in the press advocating a close season on all under 10½ inches for at least two years.

If the Federal government of the United States takes over the control of the lobster fishery from the various States and makes the size limit 10½ inches, as is the purpose of Mr. Gardner's bill, the large market for "mediums"—between 9 and 10½ inches—is gone.

Our lobster fishermen have to put up with some decidedly unfair conditions, and again, some of the lobster fishermen themselves are unfair in the way they keep the laws. It must be annoying to bring in their traps on or before a certain date, and stand by and watch the American smacks from Maine taking the lobsters by the tens of thousands right under their noses; but even that, probably, is not so annoying to the fishermen who obey the laws, as is the sight of hundreds of traps set in coves and bays illegally, for the man who wants to make an easy living off the summer tourist.

It is true that Yarmouth, Digby and Shelburne counties will not be affected to anywhere near as great an extent as the counties in Eastern Nova Scotia. Here we have a great live lobster industry—the greatest in the world—but in Eastern Nova Scotia they depend entirely on the packers. But there is a great difference of opinion both among the packers and among the fishermen, as to the most desirable step to take. Many claim that the packers who are agitating for a close season this year are those who have stocked up during the past year or two when prices have been high and now are unwilling to take their losses. Had the Kaiser been a little more considerate and held the war off a little longer these men would have made big money, but as it is they have lost or will lose if a close season is not declared.

The lobster packers of Western Nova Scotia held a meeting in Yarmouth on the 7th of this month, but could come to no decision and decided to leave the burden of choice upon the fishermen themselves. But even they are divided. One fisherman will approve of the plan on the grounds that if the small lobster is put back into the water it will help conserve the supply for future seasons, and his next door neighbor will claim that it will be best to sell them for what they can get because their present needs are of more importance than the future of the supply. In the meantime the packers who are caught now with no stock on hand are making preparations to use their factories as usual,

and the rest are holding off to see what the majority will do. But no matter what happens—whether the factories run or close—Yarmouth county particularly will be hard hit. Even under the most favorable circumstances at least $50,000 will be lost to the fishermen of the county owing to reduced prices and should the factories close the loss will be double and even treble that figure. When anything happens to the lobster industry it is touching the principal industry of the country, and its effects are fairly far-reaching.

Following is the text of the Bill introduced in the American House of Representatives by Mr. Gardner:

A BILL to prohibit interstate and foreign commerce in lobster meat and in undersized or egg-bearing lobsters.

Section 1.—Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that it shall be unlawful for any person knowingly to deliver to any common carrier for transportation or for any common carrier, vessel or person knowingly to transport from any State, Territory or District of the United States to any other State, Territory or District or to any foreign country any lobster less than ten and one half inches in length, any mutilated lobster, any female lobster carrying eggs, or any female lobster from which the eggs have been removed.

Section 2.—That the importation of lobsters less than ten and one half inches in length, of mutilated lobsters, of female lobster carrying eggs, or of female lobsters from which the eggs have been removed is forbidden.

Section 3.—That whoever shall violate section one of this Act shall be punished by a fine not exceeding $200 for each offense, or by imprisonment for a period not to exceed six months, or by both such fine and imprisonment.

THE LIFE HISTORY OE THE HALIBUT

By W. F. THOMPSON

The Provincial Fisheries Department of British Columbia has for a number of years devoted considerable attention to the investigation of the life history of a number of the chief food fishes of the Pacific. Already important contributions to the life history of the Salmons of the Pacific have been made by experts retained by that department.

The following preliminary notes upon certain phases of the Life History of the Halibut by Will F. Thompson, have been furnished by the Provincial department.

The importance of the halibut as a fish-food and the imminent danger that the supply may become seriously diminished if not exhausted on both our coasts, has aroused special interest in its present abundance and distribution and in all the facts of its life-history. Fishermen and dealers are aware that the best-known halibut banks are becoming seriously depleted by over fishing. Much of their energy is expended in seeking ever new banks, and it has become alarmingly evident that the supply is limited and is rapidly decreasing. It is beyond question that if this important source of food is not to be largely lost to the public, some protection must be extended to the species in the near future. To effect this rationally and without undue disturbance to the industry, complete knowledge of the life-history of the halibut must be obtained.

In consideration of these facts, the Fisheries Department of the Province of British Columbia has decided to prosecute an inquiry into the growth-history, food, seasonal distribution, period of fertility, the development and all other phases necessary to an understanding of the life of the halibut. To this field the writer has been assigned during the present season, and has made numerous trips with the fishing fleet to the banks of British Columbia and Alaska. So little is known of the halibut, based on adequate data, that it seems advisable to place here on record certain of the facts recently ascertained, pending a more detailed report to be presented later.

(1)—In determining the age of the halibut, the writer has made use of the otoliths, as has been done with such signal success with the European plaice. Such minor uncertainty as still attaches to the interpretation of the central area of the halibut otolith will not seriously affect the determinations here given. One hundred and fifty specimens were utilized in the series from which the fifty-nine of the following table were selected.

Year of life	Sex	Body length to Caudal base (average)	Number of specimens
VIIIth	males	31.1 inches	11
VIIIth	females	36.1 inches	24
XIIth	males	37.1 inches	6
XIIth	females	42.0 inches	6
XIV & VX	males	40.2 inches	5
XIV & XV	females	52.6 inches	5
XIX	females	65.0 inches	3

It will be noted that the speciment ranged from 31 to 65 inches long, from 8 to 19 years of age, and that the females grow more rapidly and attain a larger size than do the males. These results corroborate general beliefs which have been entertained on scanty evidence. It has long been thought that halibut reach an age of about twenty years (Joyce, in Alexander, Preliminary Examination of Halibut Fishing Grounds of the Pacific Coast, Bureau of Fisheries Document No. 763); and the different size of males and females has been known in a similar way to halibut fishermen of the Atlantic (See G. Brown Goode, Fisheries and Fishing Industries of the United States, Sec. 1, 1884, p. 189).

This difference in rate of growth and final size of males and females, which it is the sole purpose of the above table to indicate, has been corroborated in the following ways:

(a) Tables which have been compiled with data from over two thousand specimens, show the longest male which was examined to have been 47 inches in body length and the next longest 46, while the two longest females were 69 and 65 inches respectively.

(b) The graphic curves constructed for each catch show the male curve ceasing in a normal way between lengths of 40 and 44 but that of the females ceases at about 60 inches.

(c) The average length of the males in any catch is constantly less than of the females, as instanced in one catch of 50 specimens taken near Huxley Island, Queen Charlotte Group.

Sex	Number of specimens	Average length
Males	71	34.8
Females	79	38.3

This is not strictly in proportion to the age lengths, as the lower limit of size in this case is determined by the size of hook used, whereby a larger percentage of the smaller females is captured than of the smaller males. This is, incidently, the reverse of what is usually considered good practice in fish conservation. It may also be suggested here that a size limit of 42 inches (body length)would allow the escape of a large number of mature females with the loss of but few males.

(2) The fact that one or the other of the sexes may predominate in a given place at a given time is one of the most noticeable features of the halibut banks. It will suffice to give three representative instances: A catch from which fifty were taken in sequence as brought over the side of the vessel, of Yakutat, Alaska, June 28th, 1914, showed 48 females and two males, respectively, 96 per cent and 4 per cent. This was rendered more striking by the fact that the two males were taken on contiguous hooks and were only 27.0 inches in length as compared with 40.1 inches for the females. On August 12th, 1914, in 80-90 fathoms, near Kodiak, Alaska, 94 specimens gave 32 per cent females and 68 per cent males. On September 4th, 1914, in 9 fathoms, off Middleton Island, Alaska, the proportion was 88 per cent females and 12 per cent males. This proportion was found to vary widely on successive days.

(3) As the halibut boats which the writer accompanied, visited banks along both the British Columbian and Alaskan coasts, opportunity was afforded to compare fish from widely separated districts. It became at once apparent that differences existed, which seemed to be characteristic of the localities investigated. Such differences were observed in the relative size of the parts of the fish and in other respects. Thus, as shown in the following table, the length of the head in the Alaskan material is proportionately greater than in that from British Columbia.

	Kodiak Island		Middleton Island		Queen Charlottes	
Sex	No. of Specimens	Head Length	No. of Specimens	Head Length	No. of Specimens	Head Length
Female	107	29.07	148	29.16	146	26.89
Male	80	29.33	74	29.39	85	26.8

Kodiak Island is in longitude 153 deg. W., on the west side of the Gulf of Alaska, and Middleton farther east in longitude 146 deg. 15'.

Such differences may indicate the presence of local races, or they may be due to the direct modifying effect of climatal or other environment factors. In this connection, averages from two intermediate localities are given below, although the number of specimens involved is much too small. They are Dry Bay, in longitude 138 deg. 25' W., and Cape Ommaney in longitude 134 deg. 45' W.

	Dry Bay		Cape Ommaney	
Sex	No. of Specimens	Head Length	No. of Specimens	Head Length
Males	7	28.92	2	27.75
Females	28	28.22	12	27.89

Arranged in geographical sequence the averages from all localities are as follows, taking females only 29.07; 29.16; 28.2; 27.9;and 26.9. The progression shown is in striking correlation with the latitude and merits further investigation. As the data show the same results when arranged in even smaller groups of sizes, the probability is that they will hold true, most certainly in the first table given.

The difference in length of head is supplemented by a similar difference in the caudal length and in other ways. One of the most striking of these is in the fact that Alaskan specimens mature at a much smaller size, beginning at about 29 or 30 inches body length while I have yet to find a specimen from the Queen Charlottes maturing under a length of 35 inches. This is evident at a glance to one who has his attention called to it while handling fresh fish. Further data dealing with this, together with counts of fin-rays and other detail will be given in a later report.

(4) The food of the halibut is well known to exhibit great variety, but the data recently collected indicates that it differs widely on different banks and may be quite limited in any given locality. The range of food has been found to include crabs, sea anemones, star fish, sand lance (Ammodytes personatus), dogfish (Squalus sucklii), rat fish (Chimaera Hydrolagus) (Collieri), Cyclogasterids (of undetermined species), the arrow-toothed halibut (Atheresthes stomias), Octopi, grey cod (Gadus macrocephalus) and even occasional red-cod (Sebastodes) and salmon (Oncorhynchus kisutch). It is here deserving of remark that the crabs and the grey cod form the vast bulk of the food on many banks, while on at least one, the halibut used mainly the sand lance. The crabs and sand lance were eaten by halibut of small size generally in shallower water, while the grey cod was eaten in great part on the banks further removed from the shore line. Thus in 90 fathoms off Middleton Island, of 130 stomachs 59 per cent were empty, 39 per cent had grey cod, and 2 per cent had crabs and the arrow-toothed halibut.

LOW STUDDED.

Cham, the French caricaturist, was talking one day with a Gascon, who bragged that his father's ancient baronial dining hall was the wonder of the world. It was so high you could hardly see the roof.

"My father had a dining room," said Cham, "which was just as remarkable the other way. It was so low that the only fish we could serve at table was flounder!"—Exchange.

A FISHY EXCUSE.

On this particular Sunday his mother noticed that Arthur's hands were decidedly grimy when he arrived home rather late from Sunday school. Investigation aroused her suspicions.

"Arthur, I thought you went to Sunday school."

"Yes, mamma."

"How does it happen that your hands smell of fish?"

"Well ma I brought home a Sunday school magazine and the outside is all about Jonah and the whale. See—" and he pointed to the cover page.—Brockton Enterprise.

CANSO AS A FISHING CENTRE

From Its Early Settlement Down to the Present Day.

By CECIL BOYD.

Origins are interesting, whether it be the origin of an industry, a town, a world or what-not and when it happens that the rude and perhaps insignificant beginning is followed by a long record of ups and downs with a goodly share of exciting adventure, in which pioneering, war and statecraft play a leading part, then an added charm is lent to the story. Full of such incidents is the tale of Canso's growth as a mark on the map and as a fishing port—for the two are more or less related. Altogether it is a tale well worthy of any Canadian's consideration. It surprises (many natives of Canso among the number) when they learn of what an ancient and honorable history Canso can boast. Its claim to a position among the very oldest of Nova Scotia settlements is easily proven, and it is worth noting that from the coming of the earliest explorers it was Canso's advantage as a fishing centre that made the strongest appeal to those enterprising pioneers. They recognized that fish and Canso have been wedded by the hand and authority of Nature, and it is only common-sense on the part of man to further the union by industry and enterprise and so assisting in the production of a happy family.

That the French, at a very early date traded extensively along the Acadian coast and vigorously followed up the codfishery is well established. Their favorite method seems to have been to dry their fish at Canso, then at the season's close or when convenient, sailing with bumper cargoes to their distant home markets. Haliburton the Nova Scotian historian says:—"The harbor of Canso was distinguished at an early period as a place suitable for the fishery and Savalette, an old man who frequented the port, had made no less than 40 voyages to it previous to the year 1609."

The Frenchman, Lescarbot, who has preserved for us so much interesting description of conditions under the early French regime speaks of this man Savalette.

VIEW OF THE HARBOR AND TOWN.

From him we learn that "Savalette began to fish at a harbor 4 leagues (12 miles) to the Westward of Cape Canso in 1565." Murdock another historian places this harbor 6 miles West of Canso. Lescarbot further says:—"For as much as this port (which is little) hath no name I have qualified it in my geographical map with the name of "Savalet." In Champlain's map dated 1632 the Port de Savolette is marked. This was most probably Raspberry Harbor (so local authorities say) as White Haven would not be called a "little" port. Although there may be little in a name, one may be pardoned a wee regret that the name was not continued. It would have been fitting tribute to the memory of an energetic pioneer in the fishing industry of the New World—an industry which has become one of its chief sources of prosperity—having at pre-

sent in Canada a yearly value in the neighborhood of $35,000,000.

In 1607, Lescarbot was received by his countryman Savalette with all the kindness in the world. The old man told Lescarbot that "the voyage he was then engaged in was the 42nd that he had made in these parts and nevertheless the Newfoundland men do make but one in a year. He was marvellously well pleased with the fishery and told us moreover that he took every day fifty crowns worth of fish and that his voyage would be worth $1,000. He paid wages to 16 men; his vessel was of 80 tons and would carry 100,000 dry fishes. He was sometimes vexed with the savages that did cabine there who too boldly and impudently went into his ship and carried away from him what they liked." What an enterprising old sea-dog of a fisherman he must have been. Had he lived in more modern times, he would doubtless have figured as one of the champion fish-killers of the Atlantic seaboard; his schooner's name being featured in the fishery news and his crew sharing record sums.

Throughout the 17th century, the fisheries in this vicinity continued no doubt in a more or less flourishing condition though I have not been able to secure any definite accounts. In 1688, when war was brewing with Great Britain Sieur de Pasuine came out to examine and report on the defense and other conditions of the colony and in his report, the fisheries are very favorably spoken of.

By the treaty of Utrecht in 1713, the mainland of Nova Scotia passed into the hands of Great Britain but Cape Breton Island was still retained by France. An official report to the British Board of Trade refers interestingly to Canso thus:—"The French from Cape Breton have continued their fishery last season at Canso under a guard of soldiers intending that for their chief settlement if their pretended right could be made out. It is, by all accounts, the best and most convenient fishery in any part of King George I's dominions. The people from the West of England have found great satisfaction in the place and will return with many ships in the spring."

With the hoisting of the Union Jack, Canso grew in importance, becoming a greater scene of fishing activity than ever before. Fishermen and traders from New England flocked there during the summer months in great numbers. They erected many buildings, some serving as temporary living quarters, unoccupied during the winter, others as warehouses for the storage of their fish and merchandise.

But this prosperous state of affairs was soon rudely disturbed. On midnight of August 17th, 1720, a large band of hostile Indians burst without warning into the peaceful little settlement. Taken unawares and without arms, the fishermen fled to their vessels in the harbor, leaving the traders and their goods to their fate. Four Englishmen were killed and the stores plundered to the extent of $20,000 currency. The savages remained in charge until the following night when some French fishing schooners arrived and carried off the spoil. The most of this was soon recovered however, by a prompt expedition under command of an English sloop. We see by these incidents (and similar stirring ones were frequent throughout the following years) that the Canadian fisherman of those days had to face the perils of armed strife in addition to those of the sea.

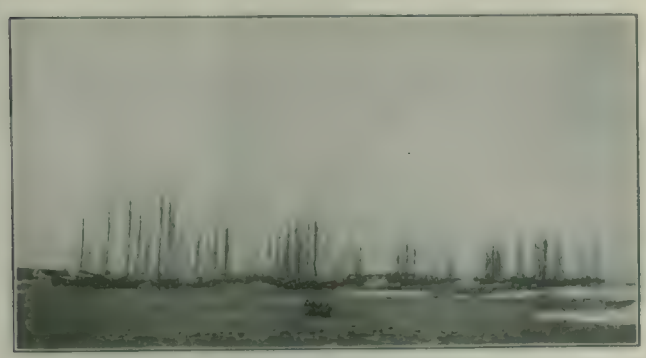
ONE OF THE FISH WHARVES, CANSO.

In September, 1720, Gen. Phillips, who had become Governor in 1717, writes thus to the authorities at home: "Canso is the first which we think ought to be possessed and defended in regard to the great advantage which accrues from the fishery and the number of British subjects which would resort there if a sure protection can be obtained; 200 men to raise the fort and 100 to be left there after the fort is built we humbly conceive to be necessary." That same autumn, a small detachment of soldiers was sent to Canso, to take possession of the small fort which the fishermen

were building and protect the place during their absence in winter. Major Armstrong in command, had power to allot the ground and beaches for the fishery, etc. This force reached Canso but not without its share of hardships, having been shipwrecked, stranded on Grand Manan, and from there taken off in a sloop.

Next year (1721) Major Armstrong sent to Annapolis asking for war stores to be laid in against an expected attack from Indians. Gov'r Phillips under date of April 4th, replied as follows:—"You must content yourself with that fort which the fishery have erected at their cost, which I hear is very defensible, and in case it wants any strengthening there is no doubt but those people will be easily persuaded to do it since it will be for their defence." An account was also ordered to be kept of the ammunition received from the Annapolis magazine. It will thus be seen that those concerned in the industry here at that time, had to pay for the protection of themselves and their property out of their own pocket.

The Indians, keeping up their unfriendly attitude, gave a good deal of trouble. On the night of July 14th, Captain Walkins a ,fisherman living on Durell's



THE FISHING FLEET IN CANSO HARBOR.

Island, some distance from the fort as well as several other men, a woman and a child met death at their hands.

Early in September of the same year the sloop William Augustus from Annapolis arrived at Canso. On board were the Govenor and an engineer engaged in surveying the coast. They carefully mapped out Canso harbor for the information of the Secretary of State, and on October 1st, the Governor wrote the Lords of Trade, saying: "It was an agreeable surprise to find Canso in a flourishing condition. It would have been broken up for good if I had not sent the detachment there, which has since been reinfrced by two companies."

He urges the importance of Canso to the fishery and to the settling of the Province and recommends that it be made a free port for 3 or 4 years. His coming was looked upon by the Canso folks as a good omen of the Government'splan for the port's future, and so caused general satisfaction. This was strengthened by his determination to remain for the winter, at the sacrifice of his personal comfort. While waiting for the expected Crown lands surveyor (for there was a British regulation at that time that all forest areas be set apart for the use of the Navy as Crown reserves) he proposed to allot small sections of land and the rocks and islands in the harbor for the accomodation of the fishery.

In reply the Lords of Trade said that they had proposed to His Majesty that the Government be given power to set out and grant lands to settlers. As to settlements on the small islands about Canso, he must keep in mind his instructions that the coast be left free for the fishery to all His Majesty's subjects.

In July, 1722, the Indians again raided the Nova Scotia coast. They did this in spite of the fact that their chiefs had but a short time previously solemnly pledged friendship with the British at a feast given by the Governor at Canso. Besides some traders in Bay of Fundy they seized 18 vessels in various ports along the coast. Among these was a sloop sent by Governor Phillius (evidently from Canso) to carry bread to the Annapolis garrison. The Redmen hoped to conquor the capital by hunger through a blockade, but this plan was frustrated by the Governor arming vessels at Canso and reaching Annapolis safely with newly-arrived supplies.

The fishing season at Canso was now in full swing. Ships riding at anchor thronged the little harbor, waiting to be loaded with the rich harvest of the sea. Then it was that disaster threatened to fall like a blight on the busy little colony. News came that Canso was to be attacked in force by the Indians who had recently ravished the coast. These latter were now reported to be cruising on the Banks in the captured ships, forcing the captive crews to sail and navigate them.

Calling to mind their former sufferings at the hands of the natives and discouraged by the lack of protection provided by the authorities, the inhabitants were filled with alarm and thought seriously of breaking up the settlement, letting each man look to his own safety.

Governor Phillips, however, was equal to the occasion. With admirable promptness and energy he stepped into the breach. It happened that New England had just declared war against the Indians, and of this declaration the Nova Scotia Governor had received a copy with a request for aid. So he called together the people of the port of Canso and persuaded them to join with him in equipping and manning two sloops for protection of the fishery. Each of these carried a squad of soldiers as well as volunteer sailors from the merchant ships in the harbor. The expedition was most successful. In the short space of three weeks, all the vessels had been retaken, and only four prisoners (afterwards "poorly ransomed by the New England people") remained in the hands of the enemy.

On May 29, 1725, Col. Armstrong (formerly with the regiment at Canso) arrived here from England, succeeding Governor Phillips, who had gone home. On August 11th he held a council with three leading officials of the colony. One of the papers he placed before them affords us some idea of the extent of Canso's commercial activity at that period. It was a list of all the craft, which during the year up to that date had called and been loaded with fish for foreign markets. The number of such was 197.

On September 5th, after peace had been made with the Indians, Governor Armstrong wrote the Secretary of State. He urged the further fortifying of Canso, as the present defences, which the people had been induced to put up, chiefly at their own expense and partly at his, were not sufficient to properly protect the place against the hostile Indians secretly supported and supplied, as they were, by the French.

Again, writing of Nova Scotia, he says:—The great number of harbors is most convenient for the fisheries. Canso is the only settlement on the Coast. Its inhabitants amount to 49 families. The New England peo-

ple trade in the cod fishery on this coast to the extent of £150,000 (New England currency) annually.

In Governor Armstrong's report to the Lords of Trade under date of January 18th, 1726, he recommends that Canso, as an important frontier post and business place, be further fortified and protected, and speaks of having placed there a garrison of nine companies. He also suggests the refitting of the Government schooner laid up at Canso, for use in the service.

The following extract from his report of July 27th is interesting: "The fishermen of Canso grumble at having to pay six shillings 8 pence to the collector and 3 shillings 4 pence to the naval officer for each vessel, having never been taxed anything before this year. Human nature was evidently quite as prone to kick against taxation then as now.

In 1728, Richard Phillips again became Governor, arriving at Canso the latter part of June. He found business booming, vessels to the number of 250 and this period, the quantity of dry codfish shipped annually in British and New England hulls to Spain, Portugal and other European points was about 50,000 to 60,000 uintals. The whole revenue of Nova Scotia, amounting to the princely sum of £30 sterling, was derived from Canso and its sea-harvest. It consisted of one quintal of cod collected yearly from each proprietor of a fishing room.

In 1732, as claims had been put forward by the French, some British troops were placed on guard, but with entirely inadequate—in fact almost without any—means of fortified defence. During the next few years increased success followed the fishery. In addition to the cod, from 1,500 to 2,000 men found profitable employment in the whale-fishery, a new departure. On September 20, 1733, 14 of these sea-giants were brought in by a fleet of 70 sloops. The arrivals reported whales of great size as being plentiful on the banks and a larger fleet of 100, laden with this valuable freight was daily expected. Fear of the Indians and of war

THE COLD STORAGE AND WHITMAN'S WHARF.

between 1,500 and 2,000 men being employed in connection with the fishery. He says:—Many families would settle here if they saw the common cement of a fortification for their protection, which till then they look upon as very precarious in regard of the numbers and strength of the enemy in case of a rupture at any time with France and the near neighborhood of Cape Breton where no industry and expense are wanting to make themselves formidable."

In 1730 Governor Phillips writes:—"Canso, which is the envy and rival of Cape Breton in the fisheries will be the first attacked in case of war with France. It will take no more than six or seven hours to march and possess it. It is reported that the return of the fish carried to markets from Canso bring £30,000 to £40,000 yearly increase to the home duties. One-third of one year's income only laid out in a fortification will put it out of danger. It will cost three times that sum to recover it if lost."

In 1731 it is said that there were not sufficient craft at Canso to carry to market all the fish on hand. At with France continue to cloud the horizon and the old time-worn complaints as to the lack of means of defence keep going in to headquarters, but evidently in vain.

In March, 1744, the expected war with France broke out. The French in Cape Breton, getting early information lost no time in attacking Canso with a force of several hundred, afterwards joined by as many Indians. The defending garrison could now barely line up 80 men and with only a small blockhouse for defence, had no chance of successful resistance, so obtaining very favorable conditions, they capitulated. The blockhouse and town were destroyed by fire, and the captives taken to Louisberg, afterward being sent at their own request, to Boston. Thus it came about that the worst fears of the settlers as to the fate of Canso because of its unprotected state, were fully realized.

The French in Nova Scotia, however, were not long allowed to remain supreme. The British in New England soon gave tit for tat by striking a blow at Louis-

burg and Canso harbor in the spring of 1745 must have presented a spectacle worth seeing as the fleet for the attack gathered there. On April 29th, after almost a month's delay from drift ice hugging the coast, the expedition sailed on its way; leaving Canso deserted and at the lowest ebb of its fortune. Yet it seems that the fishery was too attractive, to allow the place to be wholly deserted for long, for the Indians in 1749 captured 15 settlers here. These, with as many sailors from ships in the harbor, they carried off to Louisburg. Also in 1752, two schooners, one from Halifax, the other a New England vessel, while fishing near Canso were surprised and fell into the hands of the natives.

With the treaty of 1763, Nova Scotia finally became British. The following year a township was laid out at Canso, under the name of Wilmot in honor of the then Governor. Certain regulations were also laid down governing the granting of licenses for fishing rooms. The same fall, Governor Wilmot in opening the Assembly at Halifax, referred favorably to the settlement, and asked that money be voted for the building and upkeeping of a lighthouse.

During this period, the fishery began taking on new life. It continued to grow until at the time of the revolt of the New England colonies it had again reached a yearly value of £50,000. That regrettable struggle (1775-1783) was very injurious to the industry at the little port. American privateers, cruising in the vicinity, were the cause of much trouble and loss. The celebrated John Paul Jones destroyed two large schooners belonging to one George Smith, Esq., who had lately removed from Halifax to Canso and built up an extensive business. 13 other Canso craft, 9 of them square-riggers were picked up by American privateers. The damages of the war, with the growth of alifax and other points, caused Canso to again decline, so that during the latter years of the 18th century the contrast with its former prosperity was great. Where once it had been the seat of Governors and the chief commercial centre, it was now but the home of a few fisherfolk.

Perhaps the first turn in the tide towards better things was the arrival of Patrick Lannigan from Halifax, who bought an estate and started a fish business, but the permanent latter development of Canso as a fishing centre may be said to date from about 1811 when Abraham Whitman a timber merchant of Chester passed through Canso on his way to Miramichi. Evidently a man of keen observation and enterprise he was struck by the large quantities of fish apparent, which with the undeveloped nature of the place offered vast possibilities for the founding of a flourishing fishing trade. He decided to grasp the opportunity and the following year placed his eldest son James in charge of his new enterprise. Its success was such that Mr. Whitman with his family removed from Chester to Canso in January 1813. It is said that at this time there were but five other resident families from Black Point to Dover.

During the next few years, fishermen with their families began to locate on George's Island, and along the shores of "The Tittle," so called, and in 1815 with the conclusion of "The War of 1812," the fishery began to take on new life. The greatest activity was during the mackerel season, when hundreds of fishermen with their various craft, seines, nets and other gear found profitable occupation.

It may be unnecessary to note that the trade in those early days consisted solely in salt, dried and pickled fish. There was nothing resembling the immense fresh fish trade of today. Although the first venture proved a loss, through the foundering of the vessel, a brisk trade sprang up with the West Indies, Spain, the Azores and other foreign countries. Many a tale of stirring adventure might be written from the records of those voyages, without going beyond the interesting truth.

The growth of Canso, in population, industry and importance from this time on, though not of a mushroom nature was steady and sure. For some years, as is the rule in pioneer periods, trade was carried on with the aid of very little actual cash. The mutual exchange

ABRAM N. WHITMAN,
Son of the Founder of the firm of A. N. Whitman and Son.

of commodities served instead and wages were paid in the form of supplies. As the number of business establishments increased, and new branches of the fishing industry were developed, money began to flow freely and the average man became more prosperous. The islands forming the outer boundary of Canso harbor have enjoyed a share in past activities, Reuben I. Hart, of Halifax, having a quite flourishing concern there along in the thirties.

In 1854, Abraham Whitman, died at the ripe age of 94. He was succeeded in the business by his youngest son, A. N. Whitman, under whose management its expansion continued. In 1867 the first storing of ice for commercial purposes was begun by James E. Hart in a small and crude way. Today each fish firm stores at least enough for its own use, the largest handlers being Matthews and Scott, who supply many American and Provincial vessels.

For many years, the lobster has been one of Canso's important commercial assets. The pioneer packer seems to have been one W. J. Brown, a P. E. Islander, who put up some here in 1869 or 70. These were caught in ordinary iron hoops stretched with rope yarn. Brown was soon followed by Alfred Ogden (now superintendent of Lobster Hatcheries), H. L. Foran, Portland Packing Company and many others. The fishermen in those days stocked large sums at fifty cents for one hundred in count. As time went on however, and more men engaged in the catching of them, the quantity taken began to fall off and the selling price to soar. More elaborate traps also, had to be invented until that of the present day is in its way almost a work of art.

With the entension of the I. C. R. to Mulgrave and the connecting of Canso therewith by boat the possibilities of trade in fresh fish began to be appreciated for of course such a trade as an essential to success, must have a rapid and regular means of carriage. On August 1st, 1882, the "S.S. Rimouski" began her service of two trips per week between Mulgrave and Canso, which developed into the daily system carried on by the Cann Line to-day. So about 25 years ago, experimental beginnings were made in the shipping of fresh fish to Western Canada and United States. The steady development of this line may be illustrated by the following comparison of figures:—In 1891 total shipments were 162 tons, value $11,340; in 1911 total shipments were 4,110 tons, value $308,250.

The honor of discovering the valuable run of haddock which annually visits this coast during the late fall and early winter and thus opening up a resource of great benefit, belongs to the late William Hurst, during his lifetime one of Canso's hustling fishermen. On Old Christmas Day (Jan. 6) about twenty years ago he went offshore for the purpose it is said, of shacking some old gear and returned with a load of splendid haddock. From that time, the winter-haddocking took its place among the prime productive periods of the fishing season. Lasting as it does till the middle of January and sometimes later, it yields a rich revenue during months when formerly the shore boats would be laid up.

In 1909, the Whitman Fish Co. (formed in 1907 by the separation of the fishery trade from the other activities of the firm) was merged in the Maritime Fish Corporation. The other principal establishments buying and preparing the products of the sea and shipping them wherever markets may be found are A. Wilson and Son, Matthews and Scott, A. Fader and Portland Packing Co.

Whatever one's political viewpoint may be, it must be admitted that Mr. Sinclair our Federal M.P. deserves credit for what he has achieved for the general betterment of the industry. In 1905 a lobster hatchery, erected under the superintendence of Mr. Ogden (before mentioned), was placed here by the Dominion Government, in an effort to keep up the supply of these much-prized shellfish, then considered in danger of depletion. Each season more than a hundred million spawn are hatched out and scattered over the coastal waters of the vicinity. Owing to lack of definite data as to results achieved, there is considerable difference of opinion as to exactly how far this method of propagation fulfils its purpose. That the hatcheries, however, are of considerable benefit to the industry is generally acknowledged.

The greatest nuisance (to use a mild term) with which fishermen have been bothered in past years has been the voracious dogfish. This creature destructive by nature and despised as a food by man (though probably without reason) makes its yearly invasion of the fishing grounds, leaving havoc in its wake. Some ten years or so ago, the Dominion Government, in an effort to rid the coast of this pest, decided to try the experiment of buying the "dogs" from the catchers and turning them into fertilizer and oil. Accordingly the reduction works were erected at Canso and are still in operation grinding up each year an enormous amount of these hitherto worse-than-useless fish. The buying price of $4.00 per ton has never varied since the start of operations, and although the wiping-out of the dogfish is probably a long way off, yet the plant has been a splendid thing for the coast, providing a market for this fish and finding a big demand for the product turned out.

During recent years, sword fishing has developed to large proportions, becoming during August and September months, the most profitable branch of the shore fishing industry. Many of the men ship their own catches to the New England markets, thus adding considerably to their financial returns.

Since the opening here a few years ago, of a branch of the Robinson Glue Co. many odds and ends (by-products of the fishing) are utilized in the manufacture of this firm's output.

Perhaps the following table of fish shipments by the I.R.C. from Mulgrave will show more conclusively than anything else at hand the marked growth during recent years of Canso's returns from the waters that wash her shores.

Year.	Fish Shipped. Tons.	Value.
1900	1,450	$100,000
1901	1,900	133,000
1902	1,800	126,000
1903	1,600	121,000
1904	1,700	127,000
1905	2,201	116,000
1906	3,154	220,780
1907	3,156	220,920
1908	3,372	235,900
1909	2,371	191,170
1910	3,431	240,100
1911	4,110	308,250
1912	4,238	317,850
1913	5,314	398,550

The freight and express charges on the 1913 shipment came to $60,442, over $15,000 more than the preceding year. In addition to this the Dogfish Reduction Works, the Robinson Glue Co., and the various firms forwarded the following to Halifax by steamer:

250 tons fish oil	$ 12,000
75 tons fish glue	9,000
350 tons fish fertilizer	12,250
1,100 tons fish	77,000
	$110,250

The figures quoted speak for themselves and tell loudly of the value of the industry and its future possibilities. So having sketched as fully as space would permit, the chequered story of Cansos's fisheries through war and peace, through dull days and prosperous periods, from its early recognition to its recent increase, I close my tale with the fervent hope that the day will not be long delayed when Canso and the Eastern shore will possess what is urgently needed for the full growth of their expanding interests, and that is close rail connection with the outside world.

Who's Who in the Fishing World

Almost every person who has visited the beauty spots of Nova Scotia knows Digby and Bear River. Incidentally, those who are acquainted with the former place cannot help but know Mr. H. B. Short, the genial Mayor of the prosperous and beautiful little town, for the two are almost synonomous.

The sea coast settlements of Nova Scotia breed big men, and our WHO'S WHO is big in every sense of the word—big of body, of heart, of mind and ability. The many summer tourists who flock to Digby every season know that and his fame has been bruited abroad. You can meet a man up in the Maine woods deer hunting and on the mere mention of Digby he will come across at you and enquire if you know "Harry" Short. Whoever the enquirer may be, you can rely on it if he is a friend of Mr. Short, he is a good fellow.

Our subject has done much to make Digby famous as a summer resort and we would like to dilate upon his enthusiasm for his home town, but a magazine devoted to the commercial fisheries is not a tourist guide. Mr. Short's place in this biography comes of his connection with the fishing industry of the place where Digby "chickens" were first hatched. Apropos of the said "chickens," we think it was Mr. Short who received an enquiry from a city poultry dealer enquiring for prices on Digby chickens packed in crates with the feathers off. If there is any truth in this absurd story it is safe to assume that Mr. Short would not hesitate to point out the fact that Digby had long gone out of the chicken business and was now engaged in raising Finnan Haddies.

Bear River the Beautiful—the Gem of the Annapolis Basin—can claim the honor of being our subject's birthplace for Mr. Short first saw the light there on September 1st, 1864. When five years of age, his parents removed to Digby and he has been living there ever since. When a man has lived that long in a place and prospered in it, there is nothing wrong with the man or the town.

Receiving his education at the Digby Academy, Mr. Short, at 18 years, started in business as Agent of the steamship line operating services between Digby and St. John, N.B., and Boston. He remained with the Nova Scotia S. S. Coinpany for many years and while they were running as the Bay of Fundy S.S. Company, he was a director of the firm. When the Dominion Atlantic Railway took over the Bay service, Mr. Short resigned and entered the fish business—forming a partnership with Mr. James Ellis under the name of Short and Ellis.

With his partner, he assisted greatly in developing the fish business of Digby and incidently the Finnan Haddie industry for which the town is famous. In 1910, Short and Ellis sold out to the Maritime Fish Corporation, Ltd. Since that date, our subject has remained with the firm as manager of the Digby plant and in that position he still continues.

The best evidence of a man's character and popularity is drawn from what his fellow citizens think of him. Digby's citizens thought enough of Mr. Short to elect him as Mayor of the town in 1904 and again in 1905. Not content with giving him the honors of these two terms in Chief Magisterial post, he was again elected and has held the Mayorality of Digby for the past four years. Many famous people visit Digby and in his capacity as first citizen of the place, Mr. Short has acquitted himself ably and well.

When the fisheries Advisory Board was formed two years ago, our WHO'S WHO was appointed to represent the dealers and merchants of Nova Scotia—a position which by reason of his long connection with the industry he is well qualified to fill. An optimist

in the future of the Canadian fisheries and Digby as a summer resort and fishing centre; an enthusiastic and kindly host, Mr. H. B. Short is a very genial gentleman who the CANADIAN FISHERMAN is glad to be able to feature in it's WHO'S WHO column.

NIGERIA AS A MARKET FOR FISH.

Fish exporters might do worse than turn an eye to a likely market for profitable expansion. Returns as to the import trade of Nigeria have been issued, and, among other items the value of imported fish is set down.. While the United Kingdom sent to the Protectorate sea produce amounting to £20,500 for the year under review, the German competitor managed to secure orders worth £111,380. The great bulk consisted of tinned fresh herrings, and the German supply was mostly obtained from Norway.

SHOULD LOBSTER FISHING BE PROHIBITED DURING 1915

By L. H. MARTELL, M.A., B.C.L.
Barrister-at-Law.

That the year 1915 should be a close season for lobster fishing seems to be the question claiming the attention of lobster canners and dealers at the present juncture. Meetings are being held from time to time and at leading centres by the canners and dealers for the purpose of preparing their case for a close season, and to adopt ways and means looking towards the securing from the Government of Canada an Order-in-Council prescribing that during the year of 1915, no one shall fish for, catch, take, kill or can the Crustacean. A conference which met at Halifax on Thursday, November 12th, we are told unanimously adopted the following resolution:—

"That in the opinion of this meeting, the canning of lobsters should be prohibited during the year of 1915, that a joint meeting be called to discuss this matter and to appoint delegates to proceed to Ottawa to place before the Government the views of all concerned in the industry:

Further, that said delegates be composed of three from Nova Scotia, two from New Brunswick and two from Prince Edward Island."

We are told that "all those present at the conference at which the foregoing resolution was adopted were invited to express their views and as a rule, it was considered that a close season would work no hardship to the packers and exporters, as the amount of pack held over would, as far as present indications show, be sufficient to supply demands. This decision was arrived at on account of the principal buying markets being closed." Such was the general opinion of those present at the conference, and the conference was constituted or made up of the following gentlemen, viz.:—Eben Homans, Calm Harbor; W. G. Leslie, Magdalen Islands; Mr. Savage, Magdalen Islands; Hermann Stuart, Port Matoun; Mr. LeRade, Jr., Magdalen Islands; Captain Arsenault, Magdalen Islands; J. G. Farquhar, Halifax; Samuel Smith, Halifax; J. W. Smith, Halifax; J. Foster Rood, Halifax; Herbert Smith, Halifax; D. T. Leslie, Halifax; J. W. Langille, Halifax; M. J. Neville, Halifax; R. H. Williams, Halifax; T. F. Smith, Halifax; C. M. Melanson, Shediac; A. Stanford, Chester; G. W. Smith, Qouddy; L. E. Seaman, Wallace; John McLean, Souris; R. O'Leary, Richibucto; J. J. Hornby, Charlottetown; H. Wall, Yarmouth; T. LeRade, Magdalen Islands; Thomas Kickam, Souris. All the gentlemen enumerated are either canners or dealers in lobsters, so it is plainly evident that the views expressed and the resolution adopted only express the views of the canners and dealers or monied men.

It does not take a great deal of study to discern the objects of the dealers in canned lobsters who advocate a close season for lobster fishing made up of the whole of the year of 1915. One does not have to go far afield to discover that their motive in advocating such a close season is a purely selfish one. It is not that they think that the lobster fishermen will not wish to engage in catching lobsters during 1915. But be it understood that the plain facts of the case are that owing to the war now being waged in Europe, dealers have been unable to dispose of their holdings at extravagant prices; and as a result they have held most of the 1914 pack. To can lobsters next year would mean that the 1914 pack would have to compete in the markets of Europe with the pack of 1915 to the disadvantage of the older pack, and there would probably be as a result a problematical loss to the dealers holding the 1914 pack. Therefore, the plain truth is that the dealers who now advocate that 1915 be a close season for lobster canning are actuated in that advocacy by the desire for an inordinate financial gain and not by any great desire to conserve the lobster fishery.

It would be absurd to attempt to argue that the canners have no rights. They have money invested in the industry and they have legitimate claims to just consideration. But all business has, as a necessary concomitant, a certain amount of risk of loss as well as of gain, and lobster canners, or jobbers in particular, must be prepared to accept this concomitant as an element of their business. The fishermen also have rights for fair consideration which will be dealt with later on in this article, and the packers should remember these rights, and not when they are prevented from disposing of their goods by a fortuitous event, which may subject them to a loss, ask Government intervention of such a sort which if granted would bring them great financial gain at the expense of the consumer, and to the great detriment of the hardy toiler of the deep.

The Lobster Fishermen.

That the fishermen are interested in conservation is as true as an axiom of Euclid. In every part of Nova Scotia—aye, of the whole Atlantic seaboard—one will find them in favour of a close season. The Dominion Shell-Fish Fishery Commission of 1912-1913 in their Report to the Honorable the Minister of Marine and Fisheries on this point as to the fishermen's attitude towards a close season said (inter alia) as follows:—"We found in every locality that a close season is strongly favored, and the only difficulty arises from the variety of opinion as to the best period to define in the various localities to protect the spawning lobsters. In most districts a long close season with a short open season, as short as would be consistent with the profitable pursuit of the lobter industry, and in other areas the adoption of two open seasons, one in the spring and one in the fall, was urged upon the commission."

Yet the close season favored by the fishermen is not an absolute prohibition for a year or term of years, but a close season so constituted as to protect the lobster during the spawning period, and to assure to the people adequate protection of the lobster industry. To argue from the report referred to that the fishermen are in favor of a close season of a term of years is tantamount to saying that they are in favor of taking the bread out of the mouths of their families—an absurd proposition.

It is a good thing to be solicitious concerning the conservation of the resources or industries of this country, but in adopting measures looking toward conservation consideration should always be given to the implied rights of the special class of citizens who are sure to be greatly damnified by the measure adopted if the said measures are unduly restrictive. Some advance

the old adage "the greatest good to the greatest number" and claim it should always be the dominant consideration when conservation measures are proposed. But every rule has an exception, and the exception often contains a stronger equitable argument than does the rule itself, and such is the case when it comes to the question of prescribing a close season for lobster fishing. True, the industry must be conserved, but the measure of conservation adopted must not absolutely put out of business the fisherman with his implied vested rights.

What would be the result, or rather I should say results, upon the fishermen if lobster canning during the year of 1915 were wholly prohibited? One does not have to possess a very vivid imagination to forsee the damage that would ensue. In the first place, great would be the financial loss accruing to the fishermen for the following reasons:—

(a) Lobster fishing gear, supposing the fishermen are so lucky as to save and land it after the regular fishing season is over, will not keep ashore so as to be any good for future service more than one year, even though it is thoroughly dried before it is stored away, for the twine of the nets as well as the rope (which is usually what is known to fishermen as six or nine thread) soon becomes rotten, while the sills, bows and laths of the frame of the trap soon split, and become absolutely useless.

(b) Fishermen who at present rely on the lobster fishery, would be out of an occupation. Some may say that they would be able to take up the prosecution of the other kind of fisheries, but to a person like myself who was born and raised with the fishermen of the south coast of Cape Breton and who to some extent engaged in fishing, and as a consequence knows whereof he speaks, that is a barren assertion, because most of the men who engage in lobstering are not fitted out for deep sea fishing. Moreover they are for the most part without the financial means wherewith to purchase the necessary outfit of large boats, nets, lines and other things which are necessary to the carrying on of the deep sea fisheries.

(c). It would mean the depopulation of our fishing villages, for the fishermen being driven out of their means of earning a living would find it necessary to seek employment in manufacturing centres, and their families would soon follow to these centres; or, perhaps many of the fishermen would find their way to the United States and later on send for their families, to the great loss of the Dominion of Canada.

Some will say that by the prohibition of lobster canning, the fishermen will not be prevented from engaging in the lobster fishery. That statement contains a certain element of truth. True in the western portion of Nova Scotia, and along the shores of St. John and Charlotte Counties in New Brunswick, it would be possible for the fishermen to engage in the live lobster trade with the United States, and these fishermen would probably not be damnified to any great extent. But what of the fishermen along the eastern shores of Nova Scotia, and along the shores of the islands of Cape Breton and Prince Edward? They to all intents and purposes will be put out of business, for it is not possible for the fishermen of these portions of the Maritime Provinces to engage with profit in the live lobster trade with the New England States of the United States of America. The business of placing live lobsters in the Boston markets has been tried from such places as Port Morien, Main a Dieu, Louisburg and Gabarouse, in Cape Breton, but in all cases it has been a total failure, primarily owing to the great distance the lobsters have to be freighted, but also the lack of adequate transportation facilities. Therefore to absolutely prohibit canning along all the shores of the Maritime Provinces during the season of 1915 would produce a deadlock of conflicting sectional interests.

Compensation.

It seems to me that the only way in which a Government could justify the action of making 1915 a close season for lobster fishing would be by compensating the fishermen who would be damnified by such a close season. The argument in favor of compensation would certainly be a cogent and irrebutable one. Compensation is being paid to British Columbia Sealers for their alleged loss as the result of treaties made by the Government and it is certainly a good precedent for compensation to lobster fishermen if an order-in-council prescribing a close season made up of the whole of 1915 is promulgated by the Governor-General-in-Council. If it were decided to pay compensation an immense sum would be required for that purpose, for the fishermen would have to receive payment for their traps, boats and other gear, and also an estimated amount as damages for loss of his season's work. But the fishermen do not want any measure promulgated which will have the effect of putting him out of his usual business, for he loves his boat and his occupation upon the briny deep. Let us therefore hope that nothing will be done to benefit the canners and dealers at the expense of the hardy toilers of the sea.

(The above is published without prejudice, and the Editor would be glad to receive the opinions of the packers and dealers upon the subject. The views of both sides should be presented, and a satisfactory solution of the problem arrived at.—Editor, Canadian Fisherman).

STRANGE DOINGS WHEN "JUICE" GOT INTO FISH.

"Holy Mackerel," Shouted Proprietor, as He Got A Shock.

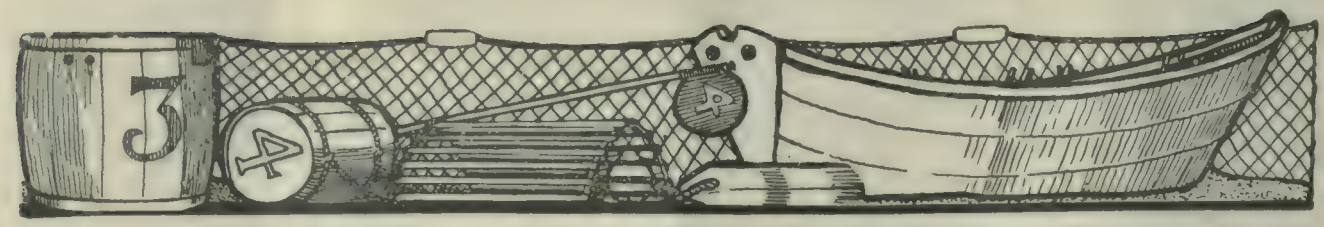
There were strange doings in the Aberdeen Fish Market, Saskatoon, recently, when the proprietor, Hughey Green, turned the electric juice into an electric fan which was supposed to fan the frost from the frosty window panes. The idea was fine, but the fan was placed on a large zinc counter which holds rabbits, herring, and other fish, which caused trouble.

Now, there must have been a leak in the fan for something happened right soon after it started to buzz. Mr. Green went to pick up a mackerel and received a shock such as he'll never get again until he's electrocuted. "Holy mackerel," says Hughey.

"Your're foolish," said a customer, as he tried to pick up a halibut steak by its tail. He dropped it like a Zeppelin bomb, and several credible witnesses maintain that he said damn.

Just then a freshly-skinned rabbit rose up on one ear and looked coquettishly at a skate.

"Mon, mon, turn off that fan," shouted Hughey to his assistant; "the place is galvanized; I canna touch a thing." So there is still frost on the window of the Aberdeen Fish Market.—Saskatchewan Star.



THE ATLANTIC FISHERIES

CANSO NOTES.

(Special Correspondence.)

During the past month or so, the local fishermen have been very badly handicapped by rough weather conditions. Every other day (with most of the days between) the wind has come off piping, sometimes ending in rain, but more often just a heavy "dry blow," and so the men have been forced to spend a good many days ashore. When they get a day on the grounds, they find the dogfish in full force. So the fall fishing up to time of writing has not been very encouraging for the shore trawlers.

The rough weather has also interfered considerably with the mackerel netters, preventing proper attention to gear. Still, some fair hauls have been made, especially during first week of November. The price received by the fishermen, however, has been variable and the lowest in years. Some catches were sold at five cents or six cents right through without any distinction for size, others at 4 and 8 or 5 and 9 for small and large and so on. A number of men from the Mulgrave shore, who for some years past have netted fall mackerel off "The Tittle" are at their old stand again.

During the latter part of October, squid were taken in fair quantities at Canso, and Hawkesbury, selling at good prices.

Johnnie Dillon, of Guyboro, the county's genial Fishery Officer, was in town during the 12th and 13th of the present month, receiving claims for bounty from this section.

On October 16, two barrels of gasoline were auctioned off by the Customs authorities here and knocked down to P. T. Smith of the Portland Packing Co. They had been left here in a hurry earlier in the season by an American swordfisherman.

In the course of time, Canso's fishing fleet will be represented at the front of Britain's line of battle. When the call for volunteers for Canada's Second Contingent came out, James Sullivan, William Fanning and Albert Lumsden, three of Canso's young and hardy fishermen enlisted with the 78th Regt. here and proceeded to Halifax a short time ago, for equipping, training, etc. Our best wishes go with them.

Mr. Roy Jamieson and family arrived home on Wednesday, November 4th, for a short visit. Mr. Jamieson worked for a number of years with the North Atlantic Fisheries branch here, in various capacities. A couple of years ago, he decided to strike out for himself and has been since building up a business of his own in Prince Edward Island, in the vicinity of Alberton and Rustico. The writer has heard Mr. Jamieson's products praised very highly. A person closely connected with fishing matters told me quite recently, that "if he is doing as well as the stock he puts out is good, he'll have no reason to complain, for he puts up first-class stuff."

Canso is pleased to have Mr. J. W. Sproule of Digby, in our midst again. Mr. Sproule was for many years one of Canso's big fish merchants and served a long term on the Town Council. A few years ago he disposed of his interests here and returned to Digby, his former home. This time he intends to get into the fish buying again, remaining at least until mid-January.

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YARMOUTH, N.S.

(Special Correspondence.)

The winter fishing season has opened "for fair" during the past month. True it has been interfered with a lot by bad weather—it has been a very "blowy" month—but when the vessels and what few boats there are still fishing have been able to get out they have done fairly well. Prices are off a little and the war is blamed for that; no doubt it has something to do with it. There is quite a large fleet of vessels making Yarmouth its headquarters this year, including practically all of the Digby fleet, a number of Americans, and, for the first time in years, several local vessels.

The mackerel have ignored us altogether this fall, but large quantities have been taken along the shore as far eastward as Halifax. A reflection of this is shown in the exceedingly large number which have been shipped to Boston through this port—4,288 barrels altogether—all fresh, beside what the fishermen have packed to go forward later. Last fall we had a big run on this shore and the fishermen hoped this would be duplicated this year, but were disappointed.

Considering the season of the year, smelts have been going forward in fair quantities, in fact the exportation of fresh fish generally has taken quite a jump. There is more going forward now in one trip of the steamer to Boston than there was in six a few weeks ago.

In my last letter I commented on the seeming lack of enterprise of the Yarmouth boat fishermen who had hauled their boats up for the season making it necessary for one of the local fish houses to send to Digby county for boat fishermen to keep them supplied with fish. Perhaps the Yarmouth men knew their business best after all, as the Digby men, finding there was too much wind in this locality, have taken their departure. At this time of the year, southerly and southwesterly winds seem to prevail. These particular winds do not affect the Digby county waters to any extent and the Digby men claimed they could put in many more days' fishing at home than they could here.

All along the shore now are to be seen evidences of the nearness of the lobster season. Laths form a large part of the cargoes of the coasting steamers, and the majority of the fishermen are turning these

laths into traps. Here's hoping they will have a good season.

The Gloucester schooner Margaret landed a man, Thomas Doran, one of the crew, here, suffering from a dislocated shoulder. He was treated at the hospital and sent home.

Speaking of Gloucester schooners puts me in mind of the fact that one of our Yarmouth skippers—Captain Alden Geel—saved his ship and crew at great risk lately. He is master of the schooner Tattler, one of Gloucester's dory handline fleet. She was fishing at the Virgin Rocks and a heavy blow came up while she was at anchor during which the vessel's rudder was carried away. This was bad enough in itself, but nothing to what followed. The wind suddenly hauled while the Tattler was right to the windward of the main ledge with the worst breakers only five hundred yards to leeward. The captain realized the situation and knew it was practically committing suicide to cut the cable, as the vessel was without a rudder. All hands thought she might hold on, but a few hours later she parted her cable. It was a perilous moment, as the craft edged by the white line of death, but she did it, thanks to seamanship and what little canvas she could carry. The Tattler lost most of her cable and with what was left she rigged an emergency rudder, and managed to make St. John's where she was repaired. She has since arrived home with 350,000 pounds of salt cod.

A matter which is causing quite a sensation in certain villages of this county is the enquiry into the death of Maurice Muise, which took place about three years ago, while he was one of the crew of the Gloucester schooner Theodore Roosevelt. About three years ago this schooner arrived at Pubnico (she was then in command of a Pubnico man) and reported that Muise had been lost overboard. At the time this was accepted as the truth. Lately there died at Morris Island a young man who was a member of the crew, and he made a statement on his death-bed which throws a different light on Muise's death. This young man claimed that the crew had all been drinking, except this man Muise, and because he would not join them he was overpowered, his throat cut, and his body thrown overboard. The authorities seem to have taken the matter up, but how much evidence they have got is not known.

The Consumers' Fish and Cold Storage Company have been getting a large number of the fares offering during the past month. This company gets the majority of the Digby schooners which sell here and it is not unusual to see from five to seven vessels around their wharf at a time and in one of their shipments lately they had over 27 tons of fresh fish for Boston.

Following are the exports for the past few weeks:

Fresh mackerel, barrels	4,288
Halibut, cases	34
Smelts, boxes	129
Fresh Fish, cases	489
Clams, barrels	321
Boneless Cod, boxes	4,690
Scallops, barrels	7
Finnen Haddies, boxes	79
Salt Herring, barrels	2,285
Pickled Fish, cases	435
Dry Salt Fish, drums	1,597
Fish Clippings, barrels	34
Salt Mackerel, barrels	161
Albacore, cases	13
Eels, barrels	42
Fish Waste, barrels	555
Hake Sounds, bags	123
Cod Oil, barrels	76
Fresh Cod, cases	7
Salt Fish Tongues, barrels	11

To Porto Rico:
100 tierces Dry Cod.

To Panama:
25 drums Dry Salt Fish.

To Havana:
63 drums Dry Salt Fish.

To Brazil:
200 tubs Dry Salt Fish.

Total value of the exports for the month: $125,524.

ST. JOHN, N.B.

(Special Correspondence.)

Prices of dried fish are easier, but fish of good quality still bring good prices. Most of the wholesalers have been getting in considerable stocks from Bay Ports, but orders come in freely. Dealers appear to be satisfied with the amount of business coming their way, but admit that the outlook for the future is uncertain. Wholesale prices here are:

Small dry cod	$4.50	to	$4.75
Medium dry cod	$5.50	to	5.60
Pollock	3.40	to	3.50
Grand Manan herring, bbl.	3.00	to	3.10
Fresh haddock, lb	0.03½	to	0.04
Fresh cod	0.03½	to	0.04
Pickled shad, half bbls.	8.00	to	12.00
Bloaters, per box	0.80	to	0.90
Finnan haddies	6.00	to	7.00
Kippered herring, per doz	....		0.90

A. O. H. Wilson, a well known fisherman of St. John, has been appointed inspector under the new Pickled Fish Inspecting Act for St. John and Charlotte Counties and Western Nova Scotia.

SHELBURNE, N.S.

Hartz Point fishermen recently made as high as $8.00 a day each, smelt fishing.

Calvin Spinney has shipped fifty-two barrels of eels of the Boston market during the past ten days.—Liverpool Advance.

Another fine new fishing schooner was successfully launched here on the 19th inst, from the well known Joseph McGill shipyard. She was built for Jos. E. Conrad and Wallace Conrad, of LaHave, N.S, and was named "Douglas B. Conrad." Her principal dimensions are: Length over all 16 feet, beam 23 feet, hold 9 feet 9 inches, registered tonnage, 96. She is from the popular semi-knockabout type, and is intended for the salt bank fisheries.

The "Douglas B. Conrad" is the fifth new vessel to be launched from this shipyard this season.

DIGBY, N.S.

(Special Correspondence.)

For the past month there has been almost a fish famine among the producers here. Notwithstanding the fact that all modern methods are employed at this port for procuring a steady supply, the scarcity that prevailed all along the coast for the past month has been felt even here and at present the demand greatly exceeds the supply. Until a week ago none of the shore boats have found it worth while to make a try at all, and the off-shore vessels have not been catching more than enough to pay their running ex-

penses. Not only the marketable fish are scarce, but also the smaller fish necessary for bait. During the first of the month, dogfish were reported all along the Bay of Fundy, but they are now slowly disappearing and a few hake, haddock and cod are being taken at Freeport, Tiverton and Colloden.

The off-shore vessels for the past month have landed here as follows:

S.S. St. Leonard	277,327
Schooner Lila Boutilier	28,642
Schooner Dorothy M. Smart	74,013
Schooner Albert J. Lutz	46,256
Schooner Loran B. Snow	33,000
Schooner Grace Darling	11,292
Schooner Cora Gertie	76,943
Schooner Dorothy G. Snow	28,825

The vessels are making a very poor fall of it; none of them have paid expenses yet, but we look for a change soon.

Owing to the scarcity of fish and the hard, rough weather, the demand for haddock is greater than usual. Haddock at this date are selling for 2¼ cents per lb.

Bait is very scarce in the Annapolis Basin, and the weather being very rough, the fleet of boats from Victoria Beach have landed small fares.

Schooner Grace Darling, Capt. Ansel Casey, during the three months of the haking season made a total stock of $5,000. The Darling is the only vessel fishing from Port Wade at present. Fish are reported to be very scarce in the Bay of Fundy.

Schooner Morning Star, Capt. Harry C. Ross, stocked in one year $33,601.67 haddocking and halibuting. Crew of 22 men shared $714.26 each. The Morning Star, though an American vessel, is manned by a Digby and Yarmouth crew.

LUNENBURG, N.S.

(Special Correspondence.)

Since our last report, the position of our fish market remains unchanged and is still very quiet. Many of the small Bay Fish cargoes have been sold at prices ranging from $4.50 to $5.00 as to quality. There are still a few remaining in the fishermen's hands. Only two cargoes of Bank Fish have been sold within the last month at $6.00 and the freight delivered in Halifax, the remaining catch still being in the hands of the fishermen, and the outlook at present is not very bright for making sales, as the markets owing to war conditions, etc., are very dull and some practically closed.

During the month some half a dozen of our vessels have left for Newfounldand to load herring, chiefly for the American market. So far none of them have returned, although it is reported that one has secured a load, and has sailed or is about sailing for her destination.

Our shore fishermen have been fortunate enough to secure quite a quantity of fine large mackerel, but the price of same are very low. Still they were a great boon to them, as it enabled them to secure amounts of cash for the same.

The property of Robin, Jones & Whitman, Ltd., is one of the largest fish firms in Canada, and the photo shows their branch at Lunenburg, N.S. The business here is varied, consisting of a general outfitting store, where a number of the vessels are fitted out yearly for the Bank fisheries, and the handling of dry fish, etc., but the chief part of the business is in packing and shipping boneless fish, which is shipped all over Canada, and the brands "Halifax," "Acadia" and "Bluenose" are well known to all consumers of fish.

Robin, Jones & Whitman's Wharf, Lunenburg.

NEW BRUNSWICK NOTES.

(Special Correspondence.)

Sardine packers of New Brunswick have made a fair pack this season, they have had to pay high prices to the fishermen, but as the American pack is several hundred thousand cases short, while the packers there had no stocks left over from last year, as is usually the case, they hope to get good prices. The British Navy has been buying New Brunswick sardines, and it is likely a good many orders will come from this source.

The herring fishing on Grand Manan during the summer was rather poor, but a short time ago herring struck in, in big schools, and while the run lasted some of the weirmen made big catches. Heavy weather this month has greatly restricted fishing operations in the Bay of Fundy.

On the North shore the ordinary fishing stopped some time ago. The run of early smelts about Richibucto did not materialize; old fishermen say that the big runs of bass which prey upon the smelts accounted for this.

"The fishermen of the North Shore have had a fairly good summer," said Richard O'Leary of Richibucto, who was in St. John the other day.

"The fishing season on the North Shore is over now, and things are quiet in that industry."

Asked about the movement among the lobster packers and fishermen with regard to formulating a policy for next year, Mr. O'Leary said a meeting of those interested in the industry had been held in Halifax recently, and that a similar meeting would be held in New Brunswick in a short time.

There is some talk of asking the government to prohibit the catching of lobsters next year, as it is believed the pack of lobsters on hand, for which there is no immediate market, is sufficient to satisfy any demands that might be made next year. The North Shore packers sold a large proportion of their catch to Germany, a market which is now closed to them and their markets in England have been seriously restricted owing to economy of the people.

While there is said to be a certain unanimity among packers and fishermen as to the need of making some change in the fishing regulations respecting lobsters, views are divergent, some favoring the establishment of a close season during the whole of the next year, and others being of the opinion that a shortening of the fishing season would better meet the situation.

PRINCE EDWARD ISLAND.

Inspection and Packing of Fish.

On November 16, Mr. J. J. Cowie of the Department of Marine and Fisheries, Ottawa, addressed a meeting of Fishermen, Fishbuyers, Fishmerchants, Packers and others interested, at St. Mary's Hall, Souris. His lecture, which consisted chiefly of an explanation of the New Pickled Fish Act, was both instructive and interesting, and Mr. Cowie deserves credit for the way he handled his subject. He pointed out that the chief object of the Act is to standardise the fish barrels and to cure and pack fish in such a way that the dealer may have confidence in what he is buying. When a barrel is badly made or made of poor material it leaks, and consequently when the fish reach the consumer they are in poor shape and in many cases rusty. The fishermen and packers are to blame for this, because they consider a cheap barrel good enough. The cooper does not get paid for a superior article and consequently does not manufacture one. In a great measure this applies to mackerel as well as herring for in many places along the coast a barrel is used that is unfit. There is also difference in size, and such a thing is bound to ruin the industry, for the dealer may be deceived in a shipment of large size barrel, while those received from another may be very small. Mr. Cowie explained that the Government, with the improvement of quality in view, purposed to make an inspection. Several inspectors will be appointed and it will be the duty of each of these to visit the different parts of his district, inspect the fish and explain to the fishermen how to handle the fish properly. This inspection must be carried out at the place of packing, and in this way defects in curing can be dealt with. If satisfied that the fish are good, well put up and properly graded, the inspector will stamp and initial the barrel. Besides having a tendency to improve the quality there will be another advantage in this inspection. The Government will advertise the brand to let others know what is being done to produce a high grade article. Better prices and a larger demand will be the result. A great many fishermen are capable of packing a good barrel; others are not. The poorer article injures the market for both. He explained that this act comes into force in May next and in the meantime copies of the Act are being distributed. The regulations give the necessary instructions in packing, grading, etc. Mr. Cowie then went on to explain the duties of the inspectors. He said that the material of which the barrel is made must be well dried, close-grained, perfectly sound and capable of retaining pickle. The barrel must be well nailed and hooped in one of these ways:—Wood hoops, iron hoops, or wood and iron. The barrel will have a capacity of 200 lbs. and must be properly filled. The cooper's name must be stamped on the barrel and also the packer's name, place of packing and quality. There are three classes of herring—July, August and Spring, the late fall herring are classed with the spring. Each class are graded No. 1 or No. 2 The fish must be sound, free from rust and bright in color. Defects are caused by leaving them lying too long in the sun. Mackerel are classed as,—Spring, Summer and Fall. There is a time in August when the fish are better than Spring fish, but not so good as those caught in the fall; these are ranked as Summer mackerel. Spring mackerel are graded, large, medium, small; Summers as, No. 2 and No. 3; and Falls as, Bloaters, No. 1, No. 2 and No. 3. After explaining the methods of inspection and the benefits to be derived he brought his lecture to a close with a few general remarks.—Charlottetown Guardian.

NOVA SCOTIA DRIED AND PICKLED FISH.

In so far as medium and lower grades of Newfoundland fish, and Lunenburg bank fish are concerned there has been no change in the situation for nearly a month, says the Maritime Merchant. The trade have ample stocks of these for present requirements and are not disposed to make purchases, even though they were offered special concessions on old prices. On the other hand holders of bank fish in Lunenburg are maintaining the stand for higher prices which they took some time ago. They base their belief in the success of their claim on the fact that there is a shortage in the supply of their particular product. In the

opinion of the trade they are doomed to meet with disappointment. We shall see.

There has, however, been quite an improvement in the situation with regard to first quality of hard shore codfish, suitable for the Italian trade, and the cause is said to be a shortage in the Newfoundland catch, due to the lateness at which the fishing season started in that colony this year. The price being paid for best shore fish by Italian buyers has surprised the trade: in fact it quite equals the expectations they had of fall prices before the war started. The pity is that they haven't more of the best quality stock, for it is showing a satisfactory profit at present prices. The balance of the shore cure in exporters hands is not so satisfactory. It will need to be marketed in the West Indies and South America and the expectation is that it will probably have to be sold at about the cost price. It is the weight of this fish on the market that is injuring the opportunity for Lunenburg and unless there is a great increase in consumption in the Brazils and the West Indies the situation is not likely to improve. At the time of writing Northern Brazil is buying moderate quantities of dried fish, but Southern Brazil is out of the market entirely. Her withdrawal as our readers know is entirely due to bad financial conditions.

Pickled Fish.

With the exception of spring mackerel all kinds of pickled fish are in good demand. Spring mackerel are moving very slowly because the American market at present has a larger supply of fat mackerel than it seems able to quickly digest. It is expected that what stocks of the former are held here will be needed in the West Indies before the winter is over. There is a good demand for herring for United States account, and supplies are being strongly held. The price ex vessel at Halifax to-day is $3.50 per barrel.

NEWFOUNDLAND FISHERIES.

There are various prices quoted, says the Trade Review, and there are various deals between the individual fisherman and his merchant, in which "no cull," "light cull" and "strict cull" figure, but, as near as we can ascertain, the following are the prices this morning. Large and small merchantable, and large and small Maderia are selling from $6.30 to $6.50; dry Labrador, $6.30; slop Labrador, $4.00 to $4.25; West India, $3.50; codoil in hard-wood packages $75.00 per tun; lobsters $12.00, but there is nothing doing in these last mentioned goods. The late Labrador season this year has been a blessing in disguise, inasmuch as it forced a larger number of fishermen than usual to bring their voyage home to cure.

The reasons for lift in fish values, the last few days, are, first, shorter voyage; second, elemination of Norwegian competition in Southern Europe by the closing of the North Sea, and the danger in the waters immediately west of the British Isles; third, the large sale of Straits and West Coast fish, as salt, bulk, to Americans and Canadians; fourth the almost "clean stores" in South European markets, when the first of our dry fish reached there. The high prices for good Labrador shore cured fish this year, will, no doubt, tend to smaller direct shipments from the Labrador coast to Europe next season.

St. John's, Saturday, November 21st.

Large, Medium and Small Merchantable	$6.30	to	$6.50
Large, Medium and Small Madreia	6.30	to	6.50
Labrador	4.20	to	4.25
Labrador, Shore Cured	6.00	to	6.30
Large and Small West India	3.50	to	3.75
Haddock, per qtl.	....		3.50
Herring, per brl., No. 1, large	....		3.00
Herring, per brl., No. 1, medium	2.60	to	2.75
Salmon, No. 1, large, per trc	....		14.00
Salmon, No. 1, small, per trc.	....		12.00
Lobsters, per case, No. 1, pound tin	12.00	to	13.00
Cod oil, per tun, h.w. pkg.	....		75.00
Cod oil, per tun, s.w. pkg.	....		69.00

Table of Exports From 1st Aug. to 20th Nov.

	1913.	1914.
Codfish, qtls:		
Portugal	18,828	6,884
Spain	63,760	53,148
Italy	72,648	87,924
British West Indies	20,480	19,439
Brazils	139,115	78,926
Dominion of Canada	3,661	193
England	1,997	6,155
Scotland	.....	150
United States	7,137	6,114
Other parts	42,280	32,121
Salmon, trcs.	2,089	1,316
Mackerel and Herrings, brls.	8,308	9,845
Cod Liver Oil, tuns	39	49
Trout, brls.	887	983
Lobsters, boxes	11,375	1,147

COMPLETE LIST OF LABRADOR ARRIVALS.

Following is a list of the arrivals and their catches, from the Straits and Labrador up to October 31st, as posted at the Board of Trade Rooms.

Conception Hr.	7	1,170
Harbor Main	6	2,190
Brigus	13	3,750
Bay Roberts	19	7,620
Spaniard's Bay	1	400
Hr. Grace	6	1,400
Heart's Content	8	1,630
Hant's Hr.	3	640
Britannia	4	1,950
Trinity	47	17,700
Catalina	14	3,200
Benavista	5	1,330
Kink's Cove	8	1,570
Salvage	14	4,740
Greenspond	43	14,320
Wesleyville	102	37,430
Change Islands	17	5,890
Herring Neck	26	9,680
Moreton's Harbor	9	2,305
Twillingate	51	21,405
Lewisporte	3	620
Exploits	7	2,100
Little Bay Islands	25	8,740
Burgeo	1	285
Gaultois	1	200
Belleoram	1	350
Stone's Cove	1	250
Total	437	152,985

The above figures give an average catch of 350 quintals.

Wholesale Fish Prices, Montreal Markets

(Quoted by D. Hatton Company.)

Trade is fairly active and prices well maintained generally. In anticipation of Advent, lots of frozen fish are moving.

Frozen halibut and frozen herrings are a little higher than last season's, all other species of frozen fish a little easier.

Demand has been exceedingly good for green codfish and pickled herrings up to close of navigation. In fact, market is pretty well cleaned out of the former, and prices have advanced materially.

Due to very stormy weather for the past two weeks, supplies of smoked fish has been only fair and as a consequence demand is good.

Bulk and Shell Oysters' turnover not quite up to expectation. The same may apply to all lines that are considered somewhat of a luxury in the fish lines.

Smoked Fish.

Haddies, 15 lb. boxes new ..per lb.	$ .07½
Haddies, 30 lb. boxes ..per lb.	.07
Haddies, Fillets..per lb.	.10
Haddies, boneless, 15 and 30 lb. boxes.. ..	.08½
Yar. Bloaters, 60 in box, Selected	1.20
St. John's Bloaters, 100 in a box	1.00
Kippered Herrings—Selected	1.30
Kippered Herrings—Other brands	1.20
Smoked Herrings—large size, per box	.15
Smoked Herrings—medium, per box..	.20
Smoked Boneless Herrings, 10 lb. box	1.00
Ciscoe Herrings, a basket 15 lbs..	1.50
Smoked Eels	.12

Fresh Fish.

Salmon Gaspe ..per lb.	.15	.16
Salmon, British Columbia ..per lb.	.13	.14
Halibut ..per lb.	.11	.12
Mackerel ..per lb.	...	.10
Haddock ..per lb.	.05	.05½
Market Codfish ..per lb.	.04½	.05
Steak Sodfish ..per lb.	.06½	.07
Smelts Medium ..per lb.		.10
Blue fish ..per lb.		.16
White fish ..per lb.		.12
Lake Trout ..per lb.		.11
Dore ..per lb.		.12
Pike ..per lb.		.08
Eels ..per lb.		.10
Carp ..per lb.		.10
Dressed Bullheads ..per lb.		.10
Perch ..per lb.		.06
Lobsters live ..per lb.		.30
Lobsters Boiled ..per lb.		.32

Frozen Fish.

Salmon—Gaspe, large ..per lb.	.14	.14½
Salmon—Red, Steel Heads ..per lb.	.12	.13
Salmon—Red, Sockeyes..per lb.	.10	.10½
Salmon—Red, Cohoes or Silvers per lb.	.09	.09½
Do. Dressed ..per lb.	...	...
Salmon and headless ..per lb.	.10	.10½
Salmon Pale Qualla, dressed ..per lb.	.07½	.08
Halibut large and medium ..per lb.	.09	.09½
Mackerel, Bloater ..per lb.	.08	.08½
Herrings, medium, 50 lb. per 100 count		1.90
Herrings, large, 85 lb. per 100 count ..		2.50
Haddock, medium & large.. ..per lb.	.04½	.05
Market Codfish ..per lb.	.04½	.05
Steak Codfish..per lb.	.06	.06½
Pollock ..per lb.	.04	.04½
Tommy Cods ..per brl.		2.25
Smelts, extras 10, 20, 25 .....per lb.		.15
Smelts, medium to large .. ..per lb.		.11
Smelts, small ..per lb.		.06
Canadian Soles ..per lb.		.07
Blue fish ..per lb.	.16	.17
Striped Sea Bass, large .. ..per lb.	.15	.16
Sea Trout ..per lb.	.10	.10½
White fish, large ..per lb.	.10½	.11
White fish, small Tulibees ..per lb.	.06½	.07
Lake Trout, large and medium per lb.	.10½	.11
Dore, dressed or round.. ..per lb.	.08½	.09
Pike, dressed and headless.. ..per lb.	.07	.07½
Pike, round..per lb.	.06	.06½
Eels ..per lb.		.10
Shad, 3 lbs. each..		.08
Frogs, 10 lbs. tins		.20

Pickled Fish.

Salmon, Labrador, Tierces 300 lb.	20.00
Salmon, Labrador, Brls. 20 0lb.	14.00
Salmon, B.C., brls.	13.00
Sea Trout, brls.	12.00
Sea Trout, half brls., halves..	6.50
Mackerel, N.S., Brls. 200 lb.	12.00
Mackerel, N.S., Hf. Brls. 100 lb.	6.75
Mackerel, N.S., Pails, 20 lb.	1.50
Herrings, Labrador, Brls.	5.50
Herrings, Nova Scotia, Brls.	5.25
Herrings, Nova Scotia, Half Brls.	2.90
Lake Trout, Half Brls.	6.00
Quebec Sardines, Brls.	6.00
Turbot, brls.	14.00

Salt Dried & Prepared Fish.

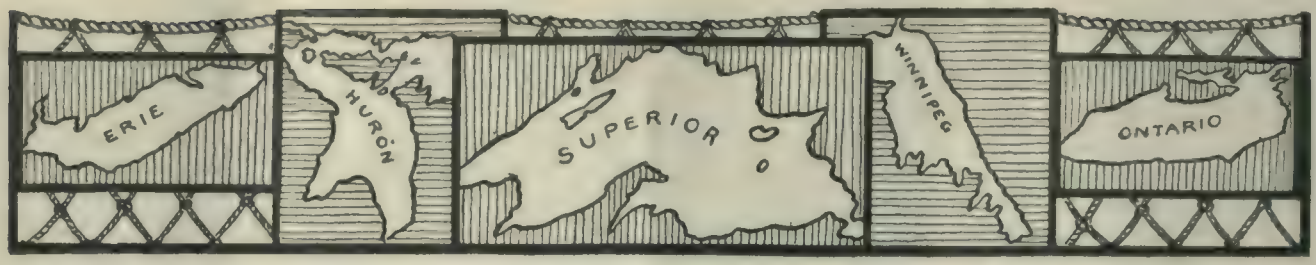
No. 1 Green Cod, large, per barrel	10.00
No. 1 Green Cod, medium, Brl..	9.00
No. 1 Green Cod, small Brl..	8.00
No. 1 Green Cod, Haddock, medium, Brl. ..	8.00
No. 1 Green Cod, Pollock, Medium, Brl. ..	7.00
No. 1 Green Cod, Hake, medium, Brl.	6.50
Quebec Eels, large, per lb.	.07
Dried Codfish, med. & small 100 lb. bundle ..	7.00
Dried Hake, medium & large 10 0lb. bundles	5.50
Dried Pollock, medium & large 100 lb. bund.	6.00
Dressed or skinless codfish, 10 0lb. case ..	7.25
Boneless Codfish, 2 lb. blocks, 20 lb. boxes	.08
Boneless Codfish, strips 30 lb. boxes	.11
Shredded Codfish, 12 lb. boxes, 24 cartons, ½ lb. each, a box	1.75

Bulk Oysters, Clams, Etc.

Best Standards, imp. gallon..	1.40
Solid meats, imp. gallon	1.70
Selects, best, imp. gallon	1.80
Selects, solid meats, imp. gallon	2.00
Best clams, imp. gallon	1.50
Best Scollops, imp. gallon	2.00
Best prawns, imp. gallon	2.00
Best Shrimps, imp. gallon	2.25
Oysters pails, ¼ gal. per 100	1.10
Oysters pails, ⅛ gal. per 100	.90
Oysters pails, 1-16 gal. per 100	.70
Sealed best standards, quart cans, each	.35
Sealed best selects, quart cans, each	.45

Oysters, Clams, Mussels and Shell Fish, Crustaceans, Etc.

Cape Cod shell oysters, per barrel	8.50
Malpeque shell oysters, selected C.C.I., brl..	11.00
Malpeque shell oysters, selected J.A.P., brl.	9.00
Malpeque shell oysters, ordinary, per brl. ..	8.00
Malpeque shell oysters, caraquets, per brl..	5.00
Clams, per barrel	7.00
Mussels, per barrel	5.00



GREAT LAKES FISHERIES

PORT STANLEY AND ITS FISHING INDUSTRY.

By MISS NETTIE BERRY.

Port Stanley, the town proper, is beautifully situated in a valley surrounded by many hills. Its location is on the north shore of Lake Erie in the county of Elgin and township of Yarmouth. Through the town flows a Creek which is known as Kettle Creek. It adds greatly to its beauty as well as being an ideal place for boating and fishing. Suckers, Bull Heads, Carp, and Cat fish are to be caught in great quantities; a draw seine net is used to catch them.

About three miles north of the town on the electric line is an inland lake or pond known as Union Pond, in which all kinds of Bass are to be had, and one mile northwest of the town is the Harding Pond, also a splendid spot for Bass fishing. In these inland lakes or ponds, nothing is allowed to be used only a hook and line. The surrounding country is considered the most productive farming district in Ontario. Port Stanley harbor is the finest harbor on the north shore of the lake. The government, during the last ten years have spent in the neighborhood of five hundred thousand dollars for two new breakwaters and repairs on piers.

Port Stanley is also noted as a splendid summer resort during the summer season. From May till September thousands of summer visitors throng the town; numerous summer cottages are built along the lake front to accommodate the crowds who love to gather and enjoy the lake breezes there, while on the beach there are three bath-houses which are up-to-date in every respect, and are well managed. There is also a fine board walk built along the beach for the use of promenaders and which has proved a great boon. Last but not least of all is the palatial Casino and Dance Hall where thousands enjoy the fine music and dances every afternoon and evening during the summer season.

Port Stanley is favored not only as a natural summer- resort but also with having the largest fleet of steam and gasoline fishing tugs on the Great Lakes.

The extensive gill net fishing business has no doubt boomed the town to a gery great extent. It gives work to an average of eight men on each tug the year round, and from twelve to sixteen from the 1st November till the 1st January, the average wage being from two and a half dollars to three and a half dollars per day. The wage is determined according to the experience a man has had in the gill net fishing. There is quite an art in being a good fisherman. Fifty cents an hour is paid for overtime.

There are at present nineteen tugs and two gasoline boats engaged in the gill net fishing and one gasoline boat fishing pond nets.

It was not until ten years ago that gill net fishing had any place in the fishing industry of Port Stanley. Before that time it was all pond net fishing and not even that to any great extent. There are splendid shipping facilities; both steam and electric railways running hourly service to St. Thomas, which is a railway centre, nine miles away.

The fishing season begins around the 1st of March, and it varies from year to year perhaps a few days, but the fishermen wait patiently for a couple of months for their first opportunity to set their nets. This time is used in repairing and making new nets for the next year's business. I may also say the gill net industry furnishes work for a great many women and girls the year around, making or mending nets, for which thirty-five to fifty cents per pound is paid, according to the size of the mesh. A girl or woman can earn on the average about two dollars per day.

As soon as the ice moves away from the shore enough to allow the boats to get out and set their nets, the year's work begins, and is one continual fishing season until it freezes up around Christmas or the New Year.

In March, the season opens with a heavy run on herring then the perch, whitefish and blue pickerel seasons follow. In the fall of the year, which is without a doubt the fisherman's harvest, nothing but herring is caught. Each boat caught last year an average of one hundred and twenty tons a piece.

In another issue of the Canadian Fisherman I will endeavor to describe some of the processes used in catching the fish.

PORT ARTHUR, ONT.

(Special Correspondence.)

The wholesale prices of fish here at the present time is as follows:

Frozen herring, 100 lbs. to a bag	$1.60
Herring, salted in half barrels, 100 lbs.	2.75
Lake Superior trout	.08½
Lake Superior whites	.10
Yellows	.07½
Jacks	.05

The effect of the war on the British east coast herring fishery is indicated by the fact that the total catch to date is 40,00,000 fish fewer than usual. Last year's total catch was 1,360,000,000 fish.

BUSINESS AS USUAL

THE PACIFIC FISHERIES

(Special Correspondence.)

Owing to the Embargo on American meats and consequent high prices on all meats, we hope that the consumption of fish will be larger than heretofore. The main bulk of mutton used on the Vancouver market comes from the U.S.A., and owing to the foot and mouth disease and the consequent fumigation ordered, all supplies are very short. Happily fish are not subject to such a disease so we all hope, that now people are practically forced to eat more fish, they will see the advantage of continuing to do so. In these days of statistics and analysis, we are shown that fish foods contain more nourishment and body-building material than any meat.

Smoked Fish.

Atlantic finnan haddies have a ready sale on the Vancouver markets, and the number of cars annually consumed are far in excess of what our Eastern friends would imagine. To get Atlantic finnan haddie here so that it will reach in good condition, means a tremendous lot of care on the part of the packers, but also the market calls for heavier smoking than is usual.

We are plentifully supplied with various kinds of Smoked fish, such as Salmon, Halibut, Herring, Black Cod, etc. Herring have been surprisingly scarce for pickling purposes, and some curers have had to seek elsewhere for raw material. Herring being fish of most uncertain habits, they have, decidedly, this season, acted contrary to previous experience, as far as the Point Grey herring are concerned.

Pickled Fish.

There are practically no fish being pickled in British Columbia now, as the runs are over for fish that we usually treat in this way. There seems to be general dissatisfaction expressed by the way markets that have been using the Alaska Herring.

The state of the Empire points to the fact that this coming year supplies from Europe will be even shorter than last season. Even if the war is over, the mines floating around the North Sea and Coast of Scotland will mean a serious loss to vessels who are venturesome enough to risk seeking fish. It will take many months to clear these waters of mines now floating around and make all safe again. It is, therefore, to the interests of those engaged in the fisheries of Canada to seek markets for their fish. At the same time it is up to them to take pains and care that this fish that they offer is put up to suit the markets they seek.

We all hailed with pleasure, the recently enacted Pickled Fish Inspection Act. Many people expressed the opinion that this act be compulsory, so that the packers who took the trouble to conform with the regulations, should not be hurt by those who were careless about their packing. The hope was also expressed that the inspectors appointed to carry out this act should be men who were thoroughly acquainted with their duties, and men, whom the packers may feel that they are getting assistance from.

We are all perfectly satisfied with the object of the Act itself, but it is required that we have these men duly qualified, and if possible each district should have a man, who is a stranger to that District.

The Press of this country allows freedom in expressing opinions ,and I am taking advantage of this. Word has reached me that there has been some dissatisfaction expressed over the appointment of Inspectors appointed under this Act. I will go even so far as to say that some packers have stated that they will do their own inspecting, as they know what they are about, and that the man who is in their district would give no service to them. I know that in this country there is usually a suspicion over every new Government appointment. Happily the bulk of these expressions of dissatisfaction are uncalled for, as the men appointed are men admirably suited to the position, but this Pickled Fish Inspection Act promises more for the fishermen of Canada, than any other measure legislated upon. All the appointments should be made on the merits of the man appointed, and we all know that choosing suitable men is a most difficult matter. But some people have expressed the opinion that they would rather have no man appointed, than a man who is looking for a "job" and treats the matter as a "job" alone, and so uses all the influence he can get to bear in his favor. We have long looked for this Act, and now that we have it, we want it to be of service to us.

Salmon.

All canneries are now closed, and about the only salmon available in any quantities have been Chums. The Japanese are dry-salting these for their own market, and the supply seems to warrant no abnormal prices. Cohoes or "Silvers" are about over. A few small "Springs" have shown up, and "Steelheads" are also putting in an appearance. To the fisherman himself the season has not been such a poor one, for although the "Sockeye" run was very poor, the quantities of other fish offering allowed the fishermen to more than pay their way.

Herring.

Large shipments, comprised of many hundred tons of dry-salt herring have already been dispatched to the Orient, and space on the boats carrying the same is booked up for some weeks ahead. What would otherwise have been a very serious situation has been relieved by the advent of the large Japanese "Osaka" S.S. Line, which is running a fortnightly service between here and Chinese ports. The fishing is all done by Japanese, but the buying and exporting is principally in the hands of the large Chinese houses. To a stranger, it appears remarkable to hear the fishermen

and the shipper conversing in English while their racial appearance is so similar.

The market of late has had a few more herring than last month, but nothing like what was offering in other seasons. There are some beautiful fish to be seen on the markets, and they range in size from what we call a Spratt up to a fish weighing up to ¾ lb. These fish have a very delicate flavor, and are very similar to the Scotch species.

Halibut.

Fresh halibut is now looked upon as more or less a luxury. Prices varying from 6c to 9c off the boats. Supplies coming in are limited and weather being bad, boats have to be out a long time before they can get anything like a trip. Seattle market is fairly well supplied, and some days it is necessary for Vancouver markets to purchase there, at the same time, if we have more than we can take care of here, Seattle takes our surplus. The quantity of frozen halibut in cold storage is in no way near that held last year. A great deal of it is already contracted for, and show prices that will allow of a profit to all concerned. There are going to be no cheap halibut this year, and with all halibut sold at 6c f.o.b., this Coast, can be delivered to the dealer cheap enough to allow it being sold retail cheap enough for anybody.

Codfish.

The markets are fairly well supplied with the local article, and as regards Alaska fish, while we handle very little here, Puget Sound points and San Francisco seem to be almost overstocked. If one may judge by the prices that San Francisco is delivering high grade boneless fish for, it looks as if packers were trying to get money in. Of course, this year the markets have been curtailed, owing to the same having been invaded by Eastern packers. It looks as if packers of Alaska Cod would have to seek the "hard-cure," and put in the necessary facilities to pack this fish. At present their cod is put up in boneless forms, and also what we call soft-cured whole-cod.

Shell-Fish.

Oysters are being offered for sale freely, and one notices new packages this year. American shippers are offering these Eastern oysters in pint, quart, half-gallon and gallon packages, and these packages are being sold to the consumer in their original form. They are not boiled or in any other way prepared, but are merely put up this way as being a handy form of package.

Crab and Local Oysters, there are a fair supply, but Shrimps and Prawns are somewhat scarce.

Mild Cured Salmon.

A few carloads of this pack have moved into New York markets, and I have heard that a few cars have moved from the Sound into Denmark. Copenhagen has always taken care of a certain number of cars each year, but from the quantity that has gone over, it looks as if our principle market, Germany, was importing through this medium. I understand that there were two cars from B.C. shipped on the Hamburg-American Line boat Kronprinsizzen Cecilie, that made such a dash back to New York at the outbreak of the war, and so saved the bullion on board.

Wedding of Note.

Th general secretary of the Vancouver Branch of the Halibut Fisheries Union, Mr. Russell Kearley, was married in Vancouver on the 9th inst., to Miss Martha Mary Monk. This wedding will be of particular interest to Newfoundlanders, owing to the fact that both the bride and bridegroom are from that country, and also that both their parents were fishermen in Newfoundland. One has only to see Mr. Kearley in his official capacity, and his friends around him to recognize where he comes from, and also one can always see at the headquarters of this Fisherman's Union, many familiar faces. Mr. and Mrs. Kearley were in receipt of many valuable presents, and they had the hearty congratulations of all British Columbia fishermen for a long and prosperous life.

Canned Salmon.

Sockeye talls	$8.25
Sockeye flats	8.75
Sockeye half-flats	10.25
Cohoe talls	4.75
Cohoe flats	4.75
Pinks humps talls	3.50
Pinks humps flats	3.50
Pinks chums talls	3.00
Pinks chums flats	3.00

Supplies of Sockeyes in hands of packers are very small, the demand is good, so holders look for perhaps higher prices. Cohoes are fairly plentiful and sales steady. Pinks are another proposition. Whereas Humps are firmly held, Chums are plentiful, but with small demand. The market conditions point to a demand arising at any time, the coming winter months should see all stocks very materially reduced.

Chums were packed in greater abundance this year than usual, packers anticipating a demand that is pretty sure to arise on account of the European situation. The fact that the run of Humps was a small one, and the gift of the Provincial Government to Great Britain consisted of these fish, what Humps are in first hands are looked upon as being valuable.

WHOLESALE FISH PRICES, VANCOUVER MARKETS.

(Quoted by London Fish Co.)

Smoked Fish.

Finnan Haddies, Atlantic 15s and 30s	per lb.	.09
Fillets, Atlantic 15s	per lb.	.10
Bloaters, Atlantic 20s.	per lb.	06
Kippers, Local	per lb.	.7
Salmon	per lb.	.12
Halibut	per lb.	.12
Kippered Salmon	per lb.	.12

Frozen Fish.

Salmon, Steelheads (round)	per lb.	.8½
Salmon, Cohoes (round)	per lb.	.06
Salmon, Cohoes (dressed)	per lb.	.07
Salmon, Qualla (round)	per lb.	.04
Salmon, Qualla (dressed)	per lb.	.05
Halibut	per lb.	.07
Smelts	per lb.	.08
Black Cod, Alaskan	per lb.	.08

Fresh Fish.

Salmon Steelheads	per lb.	.09
Salmon Cohoes	per lb.	.08
Salmon Qualla	per lb.	.04
Salmon Red Springs	per lb.	.09
Salmon White Springs	per lb.	.05
Halibut	per lb.	.08
Cod	per lb.	.06
Smelts	per lb.	.08
Herring	per lb.	.04
Soles	per lb.	.05
Whiting	per lb.	.05
Skate	per lb.	.03

Perch	per lb.	.06
Rock Cod	per lb.	.05
Red Cod	per lb.	.03
Bass	per lb.	.06
Black Cod, Alaskan	per lb.	.08
Shad, Columbia River	per lb.	.08
Sturgeon, Round	per lb.	8-.10
Sturgeon, Dressed	per lb.	.16

Pickled Fish.

Salmon (Sides), barrel 200-lb.	per lb.	.10
Alaskan Black Cod	per lb.	.08
Pacific Whole Cod	per lb.	.07
Herring Local	per lb.	.06
Herring Atlantic	per lb.	.05

Prepared Fish

Acadia No. 2 boxes	per lb.	.14
do. strips	per lb.	.13½
do. tablets	per lb.	.14
Bluenose	per lb.	.09½
Pilot	per lb.	.08½
Nova Scotia Turkey	per lb.	.07½
Pacific Boneless	per lb.	.08½

Shell Fish.

Crabs (Boundary Bay)	doz.	1.00—1.20
Shrimps	per lb.	.12— .20
Clams		.03
Clams (shelled)	per gal.	1.25
Oysters Eastern (Shells)	per doz.	0.25
Oysters Bulk	per gal.	2.85
Oysters Olympia (bulk)	per gal.	3.25

A SUITABLE GIFT.

This photograph will be of especial interest to readers of the Canadian Fisherman, representing the fishing industry in Canada's contribution to the Imperial Government. It was a happy thought on the part of the authorities of British Columbia.

Looking at the gift from a material point of view, no better advertisement could be imagined. There has been a great effort to induce the public to look on pink salmon as being equally as good and nourishing as the red sockeyes.

The entire shipment was collected, packed and shipped under the superintendence of Mr. D. W. McIntyre, Deputy Commissioner of Fisheries for British Columbia. Great credit is due him for the success of the undertaking and for the untiring method in which he carried the whole business through. It is he who designed the label which appears on each can. On this label appears the Province's coat-of-arms, surrounded by the announcement that the contents are the gift of the Province to the Imperial Government. The quality is also warranted by the British Columbia Government.

It is particularly desired by the Government of British Columbia that attention be drawn to the fact that the gift is not intended for army rations but for the "relief of distress," probably amongst the Belgians. It is for that reason that the grade sent was pink salmon, as this being half the price of sockeyes, double the quantity could be furnished. At the same time it is pointed out that these pinks are in no way inferior to the red fish, custom alone being responsible

A train load of B.C. Salmon for the Imperial Government.

for the demand for sockeyes greater than that for pinks. On the label on each can is given the following:—

Relative Food Values.

Percentage of brain, blood, bone and muscle-making elements in various foods:

	Per Cent.
Canned Salmon	218
Sirloin Steak	165
Macaroni	134
Sugar cured Ham	142
Fresh Eggs	131
Spring Chicken	128
Bread	092

Altogether, 23 box cars containing over 23,000 cases of this canned salmon left Vancouver on October 14th, forming a special train, and being given a send-off by many Government and fishing notabilities. Each car carried the following label:—

CANNED SALMON—Gift of British Columbia to Imperial Government.

PRINCE RUPERT FISHERIES.

The Canadian Fish and Cold Storage Co. at Prince Rupert has a plant of re-inforced concrete construction with a fish storage capacity of 6,500 tons, the ice making plant turning out 25 tons daily and freezing 60 tons of fish daily. The cost of this plant, with boats, etc., was $1,200,000.

The following figures relative to the catch of fish at Prince Rupert during 1913:

Salmon	$810,465
Halibut	378,900
Herring	93,840
Cod	3,225
Mixed Fish	885
Total	$1,287,315

BRITISH COLUMBIA HERRING WILL BE SHIPPED TO JAPAN.

Herring are now running in great numbers in British Columbia waters. The fishermen at Nanaimo and Prince Rupert are making huge catches and the prospects are that all past records will be smashed. The season opened the first of this month, and since that time the fishermen at the Coal City have taken 14,000 tons of herring. These fish are now being salted down and will be shipped to Japan, where the largest market for this kind of fish is found.

Prince Rupert has proven to be one of the greatest herring centres on the coast. During the herring season the northern harbor just teems with the little fish, and steamers have often ploughed their way right through huge schools of them. Now that Prince Rupert is becoming the greatest fishing station on the Pacific coast, the companies operating halibut vessels are putting huge quantities of herring in cold storage to use as bait. But still the catch of the little silversides is so great that several thousand tons are sent south to Victoria and Vancouver each year for shipment to Japan.

A little herring fishing is done off this port, but it simply supplies the local demand. There is not a heavy run of the fish in the waters around here, but off Nanaimo and Prince Rupert the herring appear at this season of the year in enormous schools. At the Coal City some of the fish is cured for Canadian and United States markets, but the bulk of it is just salted down and sent in tramp steamships to Japan.

TRAWLER ALMOST RAMMED SHIPWRECKED MEN.

George Johnson, the third officer of the Manchester Commerce, which was blown up by a mine off the Irish coast on her voyage from Manchester to Monteral, told a remarkable story on his arrival at Hull recently. Of the crew of 44 there were lost 14, including Captain Charles Payne, also of Hull. The 30 survivors drifted in a lifeboat for 13 hours until sighted by the trawler City of London.

Mr. Johnson says the trawler's skipper afterwards told him that when he saw the lifeboat's flare he was doubtful who they might be, and remembering the reward offered by the Admiralty he decided to take no chances. Therefore he switched off his light and went at full speed to sink them. Suddenly he heard the shipwrecked men cry, "Trawler, ahoy," and recognizing them as English he rang his engines astern, and rescued the men.—Central News.

SALMON HATCHERY AT NEW WESTMINSTER.

A salmon hatchery in operation will shortly become one of the sights of New Westminster. The city council last night approved an agreement with the fisheries department, mooted some time ago, whereby the building in Queens Park now used for exhibit purposes during Exhibition week only, will now be utilized for fish cultural work, ponds in which to rear the fry being constructed there. Under this arrangement the city gives the department the use of the ground required during the time it is used for this purpose, and also supplies the necessary water free. Approval was granted with the reservation that subject to such regulations as might be necessary the public should have the right to view the work as it is carried on. The alterations and construction work necessitated by this arrangement will not be expensive, probably not exceeding $1,000.

This new hatchery will carry on the work formerly done at the Bon Accord hatchery, closed down some time ago, to the extent permitted by the size of the building.

CANNERY INSPECTORS.

The naval department is taking over the duties of inspection of fish canneries and pickled fish. J. J. Cowie, of the department, has been appointed general inspector in addition to his present duties. Colson Hubbard, of Newcastle, N.B., has been appointed chief inspector for the Maritime provinces, while local inspectors have been appointed for all the canneries. For British Columbia the following inspectors have been appointed: H. J. Broder, of Nanaimo; Adams Mackie, Port Essington; C. Ternan, of Vancouver; C. L. White, Winnipeg, has been appointed for Manitoba.

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